

DEAN
TECHNOLOGY



www.deantechnology.com

2015 Power Electronics Components Catalog

High Current Rectifier Diodes
Switching and Blocking Diodes
Power IGBT and MosFETs
Power Modules - Diodes and SCRs
Puk SCR and Diodes
High Current Stud Diodes
Custom Assemblies



About Us



Dean Technology, Inc. has a long and exceptional history providing world-class products, design, and

solutions for high voltage and high power markets and applications. Grown through the consolidation of many complimentary brands, the full product offering can supply everything from components through complete systems. Headquartered in Dallas Texas, with production facilities in the United States and China, as well as sales offices throughout the world, DTI is a truly modern multi national company. Our broad range of locations and capabilities with all activities directed through a close-knit team of experienced executives, allows us to be exceptionally price competitive and flexible, while ensuring the quality and technical know how expected of a US manufacturer.

Dean Technology brings a distinctive approach to the manufacture and sale of electronics. While most manufacturers prefer the path of least resistance, seeking only new cost reducing methods and increased margins, we remain focused on providing the correct product and solution to meet each individual design. All of the engineers on our staff work directly with our customers, helping to ensure we are providing the correct technical solution, and offering lower cost items whenever appropriate. We firmly believe that through this honest, involved, and direct approach we are best able to meet our customers' needs. We know that content and successful customers are what ensure our own success.

It is this unique thinking about how to work with our customers that allows DTI to bring together the most current back office technology, modern business practices, cutting edge design and proven manufacturing techniques to offer the best and newest products while maintaining support for more traditional and legacy items. We aim to discontinue only those products for which we can immediately offer a form fit and function replacement that is equal to or better than the performance, quality and reliability of its predecessor. Where other manufacturers abandon products and markets that don't show year over year quantity growth, we see and are committed to the long-term value of everything we sell. Designing with Dean Technology product ensures you will have continued support well into the future.

Dean Technology, Inc. is focused completely on providing our customers with the very best we have to offer, in every way possible. We revel in the specific details of each and every customer's needs, and given the opportunity, will work tirelessly for their success.



Farmingdale, NJ facility



Lucernemines, PA facilities



Indiana, PA facility



Carrollton, TX facility



Anshan, Liaoning
China facility

Contact us, we're ready to help!

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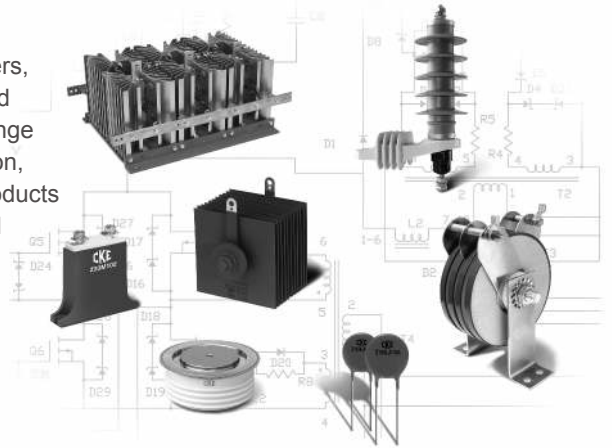
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Product Line Descriptions



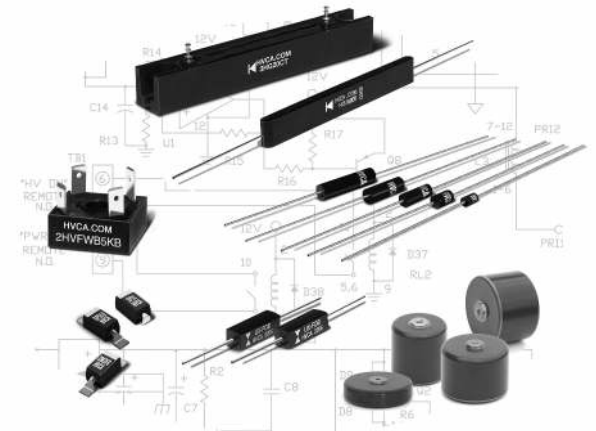
CKE

CKE is a line of high voltage and high power silicon rectifiers, MOVs, selenium suppressors, silicon carbide varistors, and assemblies. These products are appropriate for a wide range of applications, and find a special fit in the power generation, resistance welding and RF power systems markets. All products can be customized to meet specific needs, and are offered with a wide variety of packaging, and connection options.



HVCA

The HVCA product line centers on high voltage diodes, ceramic capacitors, bridge rectifiers and assemblies. Advanced diffusion and manufacturing techniques allow us to produce a wide range of diodes, and rectifier products. Tight control of these designs and processes allow for custom versions of any product within this line, and delivery on short lead times. Dean Technology has extensive expertise in high voltage assembly and encapsulation allowing replication of most any competitive or discontinued part.



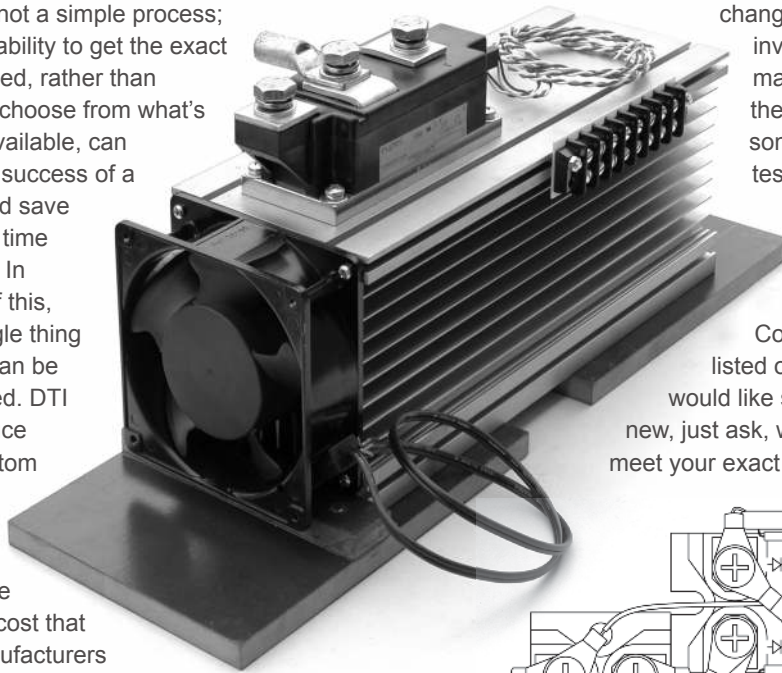
HVPSI

The HVPSI line of products includes standard, modified standard, build to print, and custom multipliers, power supplies and test equipment. The HVPSI line is our most complex, and represents all of the best we have to offer. This product line is not represented in this publication, but many of the products listed are used in the production of the HVPSI line. We believe so strongly in our own products that we are one of our own biggest customers for our own components.

High voltage power supplies and multipliers are complex and delicate designs, which require many specific features depending on the exact application. Whether for electrostatic, x-ray, imaging, or any other high voltage application, the HVPSI line and exceptional design support of Dean Technology is perfectly suited. DTI is highly dedicated to this product line, and is investing heavily in developing new techniques and products that will allow us to significantly reduce the design time on custom power supplies. This is all simply a continuation of the dedication we carry through to our customers' needs on all of our offerings.

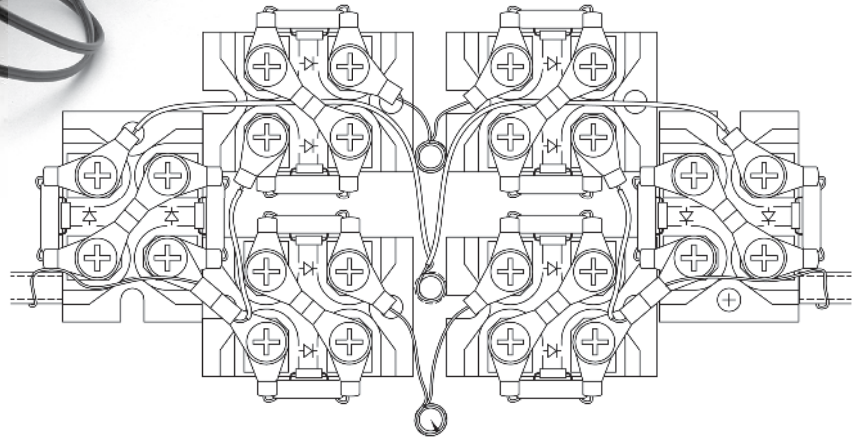


Dean Technology knows that standard products don't always meet every customer's needs. Electronics design is not a simple process; often the ability to get the exact item needed, rather than having to choose from what's already available, can mean the success of a design and save countless time and cost. In support of this, every single thing we offer can be customized. DTI can produce these custom solutions, in most cases, without the premium cost that most manufacturers require.



Specialty packages, terminal configurations, or assemblies designed to specific mechanical and electrical needs, no change or addition is too drastic. Our engineers are involved in every product recommendation we make. When we don't have a perfect offering, they are already primed and ready to help design something new. We also have all of the necessary testing facilities to aid in the development and design process, ensuring that everything we ship has been tested to meet the requirements it was designed for.

Consider this entire catalog, as well as everything listed on our website, as a capacity guide. If you would like something changed or something completely new, just ask, we'll be more than happy to work with you to meet your exact requirements.



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Features:

- Ultrafast recovery time
- Soft recovery characteristics
- Low recovery loss
- Low forward voltage
- High surge current capability
- Low leakage current
- RoHS Compliant

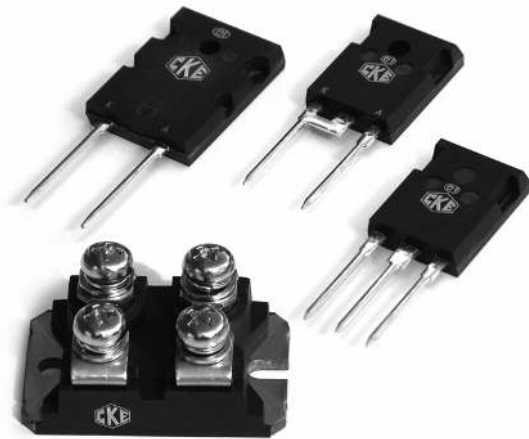
Applications:

- Switch Mode Power Supplies
- HVAC Systems
- Resistance Welding Controls
- Motor Drive Controls
- Induction Heating Equipment
- Voltage Regulators



Part Number	Repetitive Peak Reverse Voltage V_{RRM} V	Avg Forward Current I_{FAVM} @ T_C A	Case Temp T_C °C	Max Forward Voltage Drop V_F @ Rated I_F V	Max Reverse Leakage Current I_R @ V_{RRM} µA	Max Reverse Recovery Time T_{RR} nS	Thermal Resistance $R_{\theta(JC)}$ °C/W	Package Style	Figure
CKF Series Fast Recovery Diodes FREDS - Epitaxial				35 to 135nS T_{RR}					
CKF06C8B1B	600	8	110	2.45	15	80	2.5	TO-247	1
CKF06S8B1C	600	8	110	2.45	15	80	2.5	TO-247	2
CKF06S15B1C	600	15	110	1.8	10	49	1.50	TO-247	2
CKF06S30B1C	600	30	110	2.0	15	102	0.80	TO-247	2
CKF06C30B1B	600	30	110	2.0	15	102	0.80	TO-247	1
CKF06P30D1D	600	30	85	2.0	15	102	1.04	SOT-227	7
CKF06Q30D1D	600	30	85	2.0	15	102	1.04	SOT-227	7
CKF06S60B1C	600	60	110	1.8	250	54	0.50	TO-247	2
CKF06C60B1B	600	60	110	1.8	250	85	0.50	TO-247	1
CKF06P60D1D	600	60	85	1.8	250	54	0.70	SOT-227	7
CKF06Q60D1D	600	60	85	1.8	250	54	0.70	SOT-227	7
CKF06R120D1D	600	120	85	1.8	500	103	0.33	SOT-227	7
CKF06U120D1D	600	120	85	1.8	500	103	0.33	SOT-227	7
CKF12S15B1C	1200	15	110	2.5	100	55	1.50	TO-247	2
CKF12S30B1C	1200	30	110	2.5	100	244	1.10	TO-247	2
CKF12C30B1B	1200	30	110	2.5	100	244	0.6	TO-247	1
CKF12P30D1D	1200	30	85	2.5	100	244	1.43	SOT-227	7
CKF12Q30D1D	1200	30	85	2.5	100	244	1.43	SOT-227	7
CKF12R60D1D	1200	60	80	2.5	200	258	0.70	SOT-227	7
CKF12U60D1D	1200	60	80	2.5	200	258	0.70	SOT-227	7
CKF12P100D1D	1200	100	90	3.0	50	135	0.45	SOT-227	7
CKF12Q100D1D	1200	100	90	3.0	50	135	0.45	SOT-227	7
CKF12S100D1D	1200	100	90	3.0	50	135	0.45	SOT-227	7

Current ratings require assembly on an appropriately engineered heat sink and use of a quality heat coupling compound. Data for all device parameters taken at 25°C unless otherwise noted. Additional devices available on special request. Contact the factory.



Features:

- Fast recovery time
- Low forward voltage
- High surge capability
- 150 °C maximum junction temperature
- RoHS compliant

Applications:

- Induction Heating Systems
- Electric Transportation
- Welding Equipment Controls
- Battery Charging Equipment
- AC/DC Motor Controls

Part Number	Repetitive Peak Reverse Voltage V_{RRM} V	Avg Forward Current I_{FAVM} @ T_c A	Case Temp T_c °C	Typical Forward Voltage Drop V_f @ Rated I_f V	Max Reverse Leakage Current I_R @ V_{RRM} μ A	Reverse Recovery Time T_{RR} nS	Thermal Resistance $R_{\theta(JC)}$ °C/W	Package Style	Figure
CKS Series High Speed Switching Diodes						65 to 325nS T_{RR}			
CKS06S30B1C	600	30	90	2.0	50	126	1.05	TO-247	2
CKS06C30B1B	600	30	90	2.0	50	126	1.05	TO-247	1
CKS06P30D1D	600	30	90	2.0	50	126	1.50	SOT-227	7
CKS06Q30D1D	600	30	90	2.0	50	126	1.50	SOT-227	7
CKS06H30B1B	600	30	90	2.0	50	126	1.05	TO-247	1
CKS06H30D1D	600	30	90	2.0	50	126	1.40	SOT-227	7
CKS06B30B1D	600	30	90	2.0	50	126	1.05	TO-247	3
CKS06S75D1D	600	75	77	2.0	40	264	0.65	SOT-227	7
CKS06C75B1B	600	75	100	2.0	40	264	0.50	TO-247	1
CKS06C75C1B	600	75	100	2.0	40	264	0.50	TO-264	6
CKS06P75D1D	600	75	77	2.0	40	264	0.65	SOT-227	7
CKS06Q75D1D	600	75	77	2.0	40	264	0.65	SOT-227	7
CKS06S100B1C	600	100	90	2.0	40	120	0.40	TO-247	2
CKS06S100D1D	600	100	80	2.0	27	130	0.80	SOT-227	7
CKS06P100D1D	600	100	80	2.0	27	130	0.80	SOT-227	7
CKS06Q100D1D	600	100	80	2.0	27	130	0.80	SOT-227	7
CKS12S15B1C	1200	15	100	2.7	25	65	0.85	TO-247	2
CKS12S15C1A	1200	15	90	2.5	27	65	1.50	TO-264	5
CKS12C15B1B	1200	15	90	2.5	27	65	1.50	TO-247	1
CKS12S50B1C	1200	50	100	2.2	100	636	0.48	TO-247	2
CKS12S50C1A	1200	50	100	2.2	100	636	0.48	TO-264	5
CKS12C50C1B	1200	50	100	2.2	100	636	0.48	TO-264	6
CKS12P50D1D	1200	50	85	2.2	100	636	0.63	SOT-227	7
CKS12Q50D1D	1200	50	85	2.2	100	636	0.63	SOT-227	7
CKS12R100D1D	1200	100	80	1.8	200	250	0.43	SOT-227	7
CKS12U100D1D	1200	100	80	1.8	200	250	0.43	SOT-227	7

Current ratings require assembly on an appropriately engineered heat sink and use of a quality heat coupling compound.
 Data for all device parameters taken at 25°C unless otherwise noted.
 Additional devices available on special request. Contact the factory.

Features:

- High surge capability
- High peak reverse voltage
- Low forward voltage
- 150 °C maximum junction temperature
- RoHS compliant

Applications:

- High Intensity lighting controls
- Medical Laser Equipment
- High Speed Motor Controls
- Electric Material Handling Equipment
- Transmitter Power Supplies



Part Number	Repetitive Peak Reverse Voltage V_{RRM} V	Avg Forward Current I_{FAVM} @ T_C A	Case Temp T_C °C	Typical Forward Voltage Drop V_F @ Rated I_F V	Max Reverse Leakage Current I_R @ V_{RRM} mA	Reverse Recovery Time T_{RR} nS	Thermal Resistance $R_{\theta(JC)}$ °C/W	Package Style	Figure
CKR Series Standard Recovery Rectifiers									
CKR16S50B1C	1600	50	90	1.14	0.1	-	0.60	TO-247	2
CKR16H50D1D	1600	50	70	1.10	0.2	-	0.78	SOT-227	7
CKR16H70D1D	1600	70	100	1.10	10	-	0.33	SOT-227	7
CKR16S70B1C	1600	70	110	1.10	10	-	0.29	TO-247	2
CKR16S85D1D	1600	85	104	1.14	10	-	0.28	SOT-227	7
CKR16S100D1D	1600	100	100	1.55	10	-	0.22	SOT-227	7
CKR16U100D1D	1600	100	70	1.10	0.2	-	0.39	SOT-227	7
CKR16S110D1D	1600	110	85	1.13	10	-	0.47	SOT-227	7
CKR16P50D1D	1600	50	70	1.10	0.2	-	0.78	SOT-227	7
CKR16Q50D1D	1600	50	70	1.10	0.2	-	0.78	SOT-227	7
CKR16B50D1D	1600	50	90	1.25	0.1	-	1.70	SOT-227	7
CKR16P70D1D	1600	70	100	1.10	0.01	-	0.33	SOT-227	7
CKR16Q70D1D	1600	70	100	1.10	0.01	-	0.33	SOT-227	7

Data for all device parameters taken at 25°C unless otherwise noted.

Additional devices available on special request. Contact the factory.

A "-" indicates a component that is a standard recovery device and no T_{RR} data was taken.

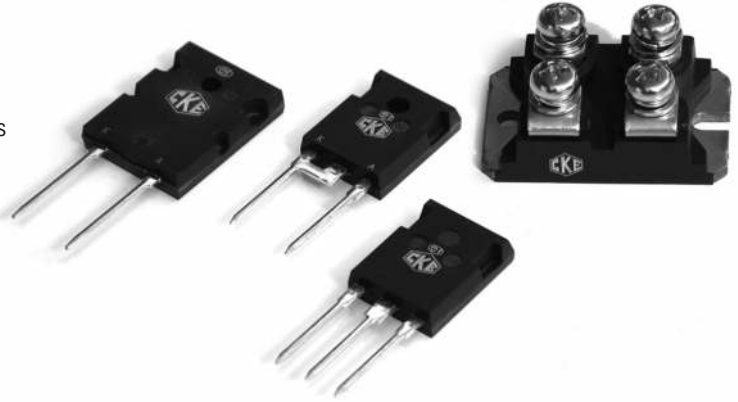
Current ratings require assembly on an appropriately engineered heat sink and use of a quality heat coupling compound.

Features:

- Very high dv/dt response
- Extremely low gate charge
- High surge current capability
- High avalanche energy rating
- Excellent thermal performance
- RoHS compliant

Applications:

- Solar inverters & converters
- Welding Inverters
- Electronic Ballasts
- Induction Heating Controls
- Low Frequency Pulse Modulators
- Linear Voltage Regulators



Part Number	Drain to Source Voltage	Continuous Drain Current	Case Temp	On Resistance	Gate Charge	Reverse Recovery Time	Thermal Resistance	Package Style	Figure
	V_{DS} V	I_D @ T_c A	T_c °C	$R_{DS(ON)}$ Ω	Q_G nC	Time T_{RR} nS	$R_{\theta(JC)}$ °C/W		
CKM Series Power MosFETs									
CKM06D39D1D	600	39	25	0.060	252	482	0.44	SOT-227	7
CKM06P56D1D	600	56	25	0.050	120	585	0.33	SOT-227	7
CKM06D62B1B	600	62	25	0.050	120	585	0.25	TO-247	1
CKM06P78D1D	600	78	25	0.035	504	482	0.22	SOT-227	7
CKM08D15E1D	800	15	25	0.290	77	484	0.72	SOT-227	7
CKM08P30D1D	800	30	25	0.145	176	550	0.36	SOT-227	7
CKM08D34B1B	800	34	25	0.145	176	550	0.28	TO-247	1
CKM08P60D1D	800	60	25	0.073	352	550	0.18	SOT-227	7
CKM09D31D1D	900	31	25	0.120	270	920	0.39	SOT-227	7
CKM09P62D1D	900	62	25	0.600	540	920	0.20	SOT-227	7
CKM09D72C1B	900	72	25	0.060	540	920	0.15	TO-264	6

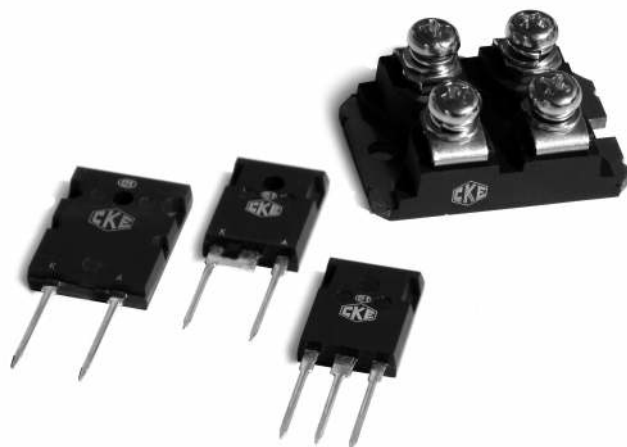
Current ratings require assembly on an appropriately engineered heat sink and use of a quality heat coupling compound.
 Data for all device parameters taken at 25°C unless otherwise noted.
 Additional devices available on special request. Contact the factory.
 Pulse width limited by maximum junction temperature.

Features:

- Rugged high reliability design
- Low switching transients & noise
- Low power loss
- Excellent thermal performance
- RoHS compliant

Applications:

- Solar inverters & converters
- Microwave Oven Power Supplies
- Switching Power Supplies
- Linear Voltage Regulators
- Low Frequency Pulse Modulators



Part Number	Collector/Emitter Voltage	DC Collector Current	Case Temp	Collector/Emitter Saturation Voltage	Total Switching Energy	Parameters at I _c Inductive Load		Thermal Resistance	Package Style	Figure
	V _{CES} V	I _c @ T _c A	T _c °C	V _{CE(SAT)} V	E _{TS} mJ	@ V _{CC} V	@ R _G Ω	R _{θ(JC)} °C/W		
CKT Series Discrete IGBTs										
CKT06N75B1B	600	75	100	2.0	5.60	400	6	0.35	TO-247	1
CKT06F75B1B	600	75	100	2.0	5.60	300	6	0.35	TO-247	1
CKT06N75D1D	600	75	100	2.0	4.50	400	5	0.46	SOT-227	7
CKT06F75D1D	600	75	80	2.0	4.50	400	5	0.46	SOT-227	7
CKT06P75D1D	600	75	80	2.0	4.50	400	2.5	0.46	SOT-227	7
CKT06N100D1D	600	100	80	1.9	8.55	300	24	0.45	SOT-227	7
CKT06F100D1D	600	100	80	1.9	10.85	300	24	0.45	SOT-227	7
CKT12H8B1E	1200	7.9	100	3.6	1.00	800	47	1.25	TO-247	4
CKT12N8B1B	1200	7.9	100	3.6	1.70	800	47	1.25	TO-247	1
CKT12N20B1B	1200	20	100	2.3	3.20	600	10	0.77	TO-247	1
CKT12F20B1B	1200	20	100	2.3	3.20	600	10	0.77	TO-247	1
CKT12N57C1B	1200	57	100	2.0	9.70	600	18	0.33	TO-264	6
CKT12F57C1B	1200	57	100	2.0	19.00	600	18.2	0.33	TO-264	6
CKT12N75B1B	1200	75	100	1.8	13.80	600	15	0.26	TO-247	1
CKT12N75C1B	1200	75	100	1.8	13.80	600	15	0.26	TO-264	6
CKT12N75D1D	1200	75	80	1.8	13.80	600	15	0.22	SOT-227	7
CKT12F75D1D	1200	75	80	2.3	13.80	600	15	0.22	SOT-227	7
CKT12F75C1B	1200	75	100	1.8	13.80	600	15	0.26	TO-264	6
CKT12N150D1D	1200	150	80	1.9	21.00	600	6.8	0.14	SOT-227	7
CKT12F150D1D	1200	150	80	1.9	21.00	600	6.8	0.14	SOT-227	7

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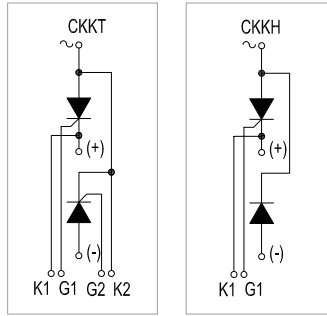


Features:

- High surge current capability
- Low leakage current
- RoHS Compliant
- Electrically isolated base
- Industry standard packages

Applications:

- Electronic welding controls
- Battery charging applications
- Lighting controls
- AC & DC motor drives and controls
- HVAC control systems



Part Number	Rep Peak Rev Voltage	Max Avg Fwd Current	Case Temp	Max Output Current	Max Surge Current	I ² t Max for Fusing	Max Fwd Voltage Drop	
	V _{RRM} V	I _{T(AV)} @ T _C A	T _C °C	I _{T(RMS)} ¹ A	I _{TSM} @ 60Hz A	I ² t @ 60Hz KA ² s	V _{TM} V	I _{TM} A
CKKT & CKKH/• Series Power Modules - Thyristor/Thyristor & Thyristor/Diode								
CKK±26/•	400-1600	27	85	60	560	1.3	1.95	85
CKK±41/•	400-1600	45	85	100	810	2.7	1.81	141
CKK±56/•	400-1600	60	85	135	1310	7.1	1.54	189
CKK±71/•	400-1600	75	85	165	1610	10.9	1.59	236
CKK±91/•	400-1600	95	85	210	1785	14.6	1.58	300
CKK±105/•	400-1600	105	85	235	1785	14.6	1.64	330
CKK±136/•	400-1600	135	85	300	3360	47	1.66	425
CKK±142/•	400-1600	140	85	310	5000	103	1.32	440
CKK±162/•	400-1600	160	85	355	5350	119	1.26	503
CKK±170/•	400-1800	170	85	377	5350	119	1.60	534
CKK±230/•	400-1800	230	85	510	7850	256	1.59	723
CKK±250/•	400-1800	250	85	555	8900	330	1.44	785
CKK±280/•	400-2200	280	79	440	7840	255	1.55	750
CKK±330/•	400-1600	330	85	520	9420	370	1.44	1037
CKK±500/•	400-1800	540	85	850	18700	1452	1.50	1696
CKK±570/•	400-1800	570	85	895	18700	1452	1.44	1791
CKK±650/•	1000-1200	650	85	1020	23915	1750	1.40	1978
CKK±715/•	1000-1800	715	85	1123	26330	2320	1.45	2512
CKK±800/•	1000-1800	800	78	1256	28000	3920	1.45	2513
CKK±1000/•	1000-1200	1000	77	1570	32000	5120	1.25	3142

Part Number	Max Total Thermal Res	Low Level Fwd Slope Resistance	Threshold Voltage	Max Gate Trigger Conditions		Critical Rate of Rise		Figure
	R _{θ(JS)} °C/W	r _F mΩ	V _{T(TO)} V	V _{GT} V	I _{GT} mA	Volts/μS dv/dt V	Amps/μS di/dt I	
CKKT & CKKH/• Series Power Modules - Thyristor/Thyristor & Thyristor/Diode								
CKK±26/•	0.410	12.11	0.92	2.5	150	1000	150	8
CKK±41/•	0.330	5.90	0.88	2.5	150	1000	150	8
CKK±56/•	0.300	3.53	0.85	2.5	150	1000	150	8
CKK±71/•	0.265	3.00	0.82	2.5	150	1000	150	8
CKK±91/•	0.235	2.40	0.80	2.5	150	1000	150	8
CKK±105/•	0.235	2.37	0.80	2.5	150	1000	150	8
CKK±136/•	0.235	1.62	0.98	3.0	200	1000	300	9
CKK±142/•	0.205	0.92	0.75	3.0	200	1000	500	9
CKK±162/•	0.205	0.84	0.79	3.0	200	1000	500	9
CKK±170/•	0.190	1.34	0.89	3.0	200	1000	500	10
CKK±230/•	0.145	0.77	1.03	3.0	200	1000	500	10
CKK±250/•	0.145	0.60	0.97	3.0	200	1000	500	10
CKK±280/•	0.131	0.75	0.90	3.0	200	500	100	10
CKK±330/•	0.130	0.60	0.80	2.0	200	1000	250	10
CKK±500/•	0.082	0.27	0.92	3.0	200	1000	200	11
CKK±570/•	0.089	0.32	0.78	3.0	200	1000	250	11
CKK±650/•	0.085	0.10	0.85	2.5	250	500	100	11
CKK±715/•	0.066	0.20	0.85	2.5	250	500	100	12
CKK±800/•	0.066	0.23	0.85	2.5	250	1000	400	12
CKK±1000/•	0.066	0.15	0.90	2.5	250	1000	400	12

Notes:

¹ For Thyristors when used in AC switch application only

² Temperatures T_{STG} & T_J at -40°C to +125°C

Data for all device parameters taken at 25°C unless otherwise noted.

± Replace the double plus symbol with the T or H style indicator per datasheet.

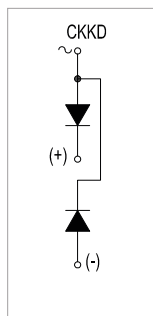
• Replace the bullet symbol with the first two numbers of the desired voltage listed in the V_{RRM} column of the table e.g. CKK71/08 for 800 Volts V_{RRM} or CKKT71/12 for 1200 Volts

Features:

- High surge current capability
- Low leakage current
- RoHS Compliant
- Electrically isolated base
- Industry standard packages

Applications:

- Electronic welding controls
- Battery charging applications
- Power supplies
- High Power motor drives



Part Number	Rep Peak Rev Voltage V_{RRM} V	Max Avg Fwd Current $I_{F(AV)}$ @ T_c A	Max Case Temp T_c °C	Max Surge Current I_{FSM} @ 60Hz A	I^2t Max for Fusing I^2t @ 60Hz KA ² s	Max Fwd Voltage Drop @ I_{FM} V_{FM} V	Max Fwd Current I_{FM} A	Max Total Thermal Resistance $R_{\theta(JS)}$ °C/W	Low Level Fwd Slope Resistance r_F mΩ	Threshold Voltage $V_{F(TO)}$ V	Figure
CKKD/• Series Power Modules - Diode/Diode - Standard Recovery											
CKKD56/•	400-1600	55	100	1660	11.76	1.35	172	0.425	3.76	0.71	8
CKKD71/•	400-1600	70	100	1870	14.53	1.36	220	0.385	2.8	0.61	8
CKKD91/•	400-1600	90	100	2110	18.65	1.34	282	0.32	1.81	0.66	8
CKKD105/•	400-1600	105	87	2110	18.65	1.34	330	0.32	1.81	0.66	8
CKKD166/•	400-1600	165	100	4200	73	1.57	518	0.235	1.69	0.70	9
CKKD196/•	400-1600	195	100	4980	103	1.32	612	0.235	0.92	0.75	9
CKKD236/•	400-1600	230	100	6850	195	1.26	722	0.205	0.64	0.79	9
CKKD250/•	400-1800	250	100	7345	225	1.29	785	0.195	0.63	0.79	10
CKKD270/•	400-1800	270	100	9430	363	1.48	848	0.16	0.94	0.74	10
CKKD320/•	400-1800	320	100	10580	466	1.28	1005	0.16	0.59	0.69	10
CKKD350/•	400-1600	350	100	10580	466	1.25	1100	0.16	0.59	0.69	10
CKKD570/•	1200-2200	570	100	15750	1181	1.30	1790	0.085	0.38	0.80	11
CKKD700/•	1000-2200	701	100	26325	2315	1.3	2202	0.092	0.28	0.70	11
CKKD1000/•	400-1600	1000	100	31000	3260	1.41	3410	0.062	0.15	0.85	12

Notes:

¹ Temperatures T_{STG} & T_J at -40°C to +125°C

Current ratings require assembly on an appropriately engineered heat sink and use of a quality heat coupling compound.

Data for all device parameters taken at 25°C unless otherwise noted.

‡ Replace the double plus symbol with the D, T, U or H style indicator per datasheet.

• Replace the bullet symbol with the first two numbers of the desired voltage listed in the V_{RRM} column of the table e.g. CKKD71/08 for 800 Volts V_{RRM} or CKKT71/12 for 1200 Volts

Additional devices available on special request. Contact the factory.



Features:

- Diffused diode
- High voltage ratings
- High surge capabilities
- Stud cathode and anode versions
- Hermetic metal case
- RoHS Compliant

Applications:

- Welding equipment
- Power Supplies
- Battery Chargers
- High power motor drives
- Free wheeling diodes

Part Number	Rep Peak	Mean Fwd	Max	Max	Repetitive Peak		I ² t	Maximum
	Rev Voltage	Current	Case	Surge	Reverse	Current	Max	
	V _{RRM}	I _{F(AV)} @ T _C	Temp T _C	I _{FSM}	I _{RRM} @ V _{RRM}	T _{J(MAX)}	For	T _{RR}
	V	A	°C	A	mA	°C	Fusing	nS
							KA ² S	
Stud Mounted Diodes								
16F•40 - 16F•160	400 - 1600	16	160	356	1	160	0.703	-
40HF•40 - 40HF•160	400 - 1600	40	140	560	8	140	3.200	-
70HF•40 - 70HF•160	400 - 1600	70	140	1200	10	180	7.100	-
70HFL•40S02 - 70HFL•100S02	400 - 1000	70	75	730	15	125	2.240	200
70HFL•40S05 - 70HFL•100S05	400 - 1000	70	75	730	15	125	2.240	500
70HFL•40S10 - 70HFL•100S10	400 - 1000	70	75	730	15	125	2.240	1000
85HF•40 - 85HF•160	400 - 1600	85	140	1700	4	150	14.500	-
85HFL•40S02 - 85HFL•100S02	400 - 1000	85	75	1151	20	125	5.523	200
85HFL•40S05 - 85HFL•100S05	400 - 1000	85	75	1151	20	125	5.523	500
85HFL•40S10 - 85HFL•100S10	400 - 1000	85	75	1151	20	125	5.523	1000
150K•40 - 150K•160	400 - 1600	150	130	3570	35	200	64.000	-
150KS•40 - 150KS•160	400 - 1600	150	130	3570	35	200	64.000	-
150U•40 - 150U•160	400 - 1600	150	130	3570	35	200	64.000	-
150L•40 - 150L•160	400 - 1600	150	130	3570	35	200	64.000	-
300U•40 - 300U•160	400 - 1600	300	125	5000	200	200	12.500	-

Part Number	Max Forward	Threshold	Fwd Slope	Thermal	Mounting	Package	Figure
	Voltage Drop	Voltage	Resistance	Resistance			
	V _{FM@I_{F(AV)}}	V _{F(T0)}	r _F	R _{θ(JC)}	Torque ¹	Style	
	V	V	MΩ	°C/W	in/lb		
Stud Mounted Diodes							
16F•40 - 16F•160	1.20	-	-	0.5	10 - 15	DO-4	23
40HF•40 - 40HF•160	1.35	-	-	1	20 - 30	DO-5	24
70HF•40 - 70HF•160	1.35	-	-	0.45	20 - 30	DO-5	25
70HFL•40S02 - 70HFL•100S02	1.85	1.09	3.40	0.36	20 - 30	DO-5	25
70HFL•40S05 - 70HFL•100S05	1.85	1.09	3.40	0.36	20 - 30	DO-5	25
70HFL•40S10 - 70HFL•100S10	1.85	1.09	3.40	0.36	20 - 30	DO-5	25
85HF•40 - 85HF•160	1.30	-	-	0.35	20 - 30	DO-5	26
85HFL•40S02 - 85HFL•100S02	1.75	1.13	2.11	0.3	20 - 30	DO-5	26
85HFL•40S05 - 85HFL•100S05	1.75	1.13	2.11	0.3	20 - 30	DO-5	26
85HFL•40S10 - 85HFL•100S10	1.75	1.13	2.11	0.3	20 - 30	DO-5	26
150K•40 - 150K•160	1.40	-	-	0.25	125 - 150	DO-8	27
150KS•40 - 150KS•160	1.40	-	-	0.25	125 - 150	DO-8	28
150U•40 - 150U•160	1.40	-	-	0.25	125 - 150	DO-8	30
150L•40 - 150L•160	1.40	-	-	0.25	125 - 150	DO-30	29
300U•40 - 300U•160	1.40	-	-	0.12	275 - 325	DO-9	31

Notes:

¹ Indicated torque values are for non-lubricated installations.

Data for all device parameters taken at 25°C unless otherwise noted.

Additional devices available on special request. Contact the factory.

A “-” indicates that a component is a standard recovery device and no data was taken.

• For reversed polarity versions, replace the • with the letter “R” in the part number. e.g. 40HF•20 would become 40FHR20.

Current ratings require assembly on a appropriately engineered heat sink and use of a quality heat coupling compound.



Features:

- Wide current range
- High voltage ratings
- Very high surge current capabilities
- Diffused junction
- RoHS compliant

Applications:

- Inverter/Converter controls
- Traditional Power supplies
- Phase control systems
- High power motor drives
- Traction power systems

Part Number	V _{RRM} V	I _{F(AV)} A	T _C °C	I _{FSM} A	I ² t KA ² s	I _{RRM} @T _{J(MAX)} mA	V _{FM} V	I _{FM} A	T _{J(MAX)} °C	R _{θJ-C} ³ °C/W	F _M Lbs	Figure
DPS Series - Standard Recovery Diode Capsules												
D30P400S	500-1500	400	115	7000	170	40	1.400	1200	185	0.055	1000	13
D30P1200S	500-1500	1200	115	11100	510	40	1.650	3800	185	0.055	1000	13
D38P750S	1500-3000	750	90	10000	417	50	1.700	2400	175	0.040	4000	14
D38P1000S	1000-2000	1000	90	12000	600	50	1.750	3200	185	0.040	4000	14
D38P1000S1	1500-2600	1000	90	12000	600	50	1.750	3200	200	0.040	4000	14
D38P1000S3	3500-4500	1000	85	11000	500	50	1.400	1000	170	0.040	4000	14
D38P1200S	2800-3500	1200	85	13000	700	50	1.200	1000	170	0.040	4000	14
D38P1500S	1500-2600	1500	90	16000	1060	50	1.650	4700	185	0.040	4000	14
D52P1800S	2500-3000	1800	100	25000	2600	50	1.800	5000	175	0.023	5000	15
D52P2400S	1400-2000	2400	100	32000	4300	50	1.700	7600	185	0.023	5000	15
D77P2900S	3800-4500	2900	100	40000	6600	100	1.150	2000	170	0.012	8000	17
D77P3900S	2700-3200	3900	100	60000	14900	100	1.050	2000	175	0.012	8000	17
D77P4400S	1800-2600	4400	100	60000	14900	100	0.865	2000	185	0.012	8000	17
DPF Series - Fast Recovery Diode Capsules												
D30P650F	500-1500	650	65	10000	410	40	1.90	2000	125	0.055	1000	14
D38P600F	600-1500	600	65	10000	415	50	1.80	2000	125	0.043	4000	15
D38P1000F	1500-2000	1000	78	14000	815	50	3.00	3200	125	0.043	4000	15
D52P925F	1500-2400	925	70	18000	1300	75	2.65	2900	150	0.023	5000	16

Part Number	V _{RRM} V	I _{T(AV)} A	T _C °C	I _{TSM} A	I ² t KA ² S	I _{RRM} @T _{J(MAX)} mA	V _{TM} V	I _{TM} A	T _{J(MAX)} °C	di/dt A/μS	dv/dt V/μS	I _{GT} /V _{GT} mA/V	t ₀ μS	I _H mA	F _M Lbs	R _{θJ-C} ³ °C/W	Figure
TPS Series - Phase Control SCR Capsules¹																	
T30P600S	1000-2000	600	65	7500	235	30	2.30	2000	125	400	200	150/3	200	400	1000	0.0550	18
T30P700S	500-1400	700	65	8000	265	30	2.20	2000	125	400	200	150/3	200	400	1000	0.0550	18
T38P400S	3500-4500	400	70	5500	130	75	2.10	500	125	200	1000	150/3	400	400	3000	0.0400	19
T38P750S	1000-2000	750	67	11000	500	35	1.80	2200	125	400	200	150/3	200	400	3000	0.0400	19
T38P900S	500-1600	900	67	13000	700	35	1.60	2800	125	400	200	150/3	200	400	3000	0.0400	19
T52P800S	4000-4500	800	70	9000	330	75	2.00	1000	125	150	1000	150/3	500	400	5500	0.0250	20
T52P950S	3500-4000	950	70	16000	1000	75	1.60	1000	125	150	1000	150/3	500	400	5500	0.0250	20
T52P1000S	2200-3200	1000	74	15000	937	75	2.26	3000	125	300	300	150/3	250	400	5500	0.0250	20
T52P1300S	500-2000	1300	65	20000	1700	65	1.75	3000	125	400	400	150/3	250	400	5500	0.0250	20
T52P1500S	500-2000	1500	65	23000	2200	65	1.65	3000	125	400	400	150/3	250	400	5500	0.0250	20
T52P1640S	500-1400	1640	65	28500	3400	65	1.40	3000	125	400	400	150/3	250	400	5500	0.0250	20
T65P1200S	3600-4400	1200	65	20000	1900	150	2.00	2000	125	250	500	200/4	250	500	8000	0.0170	21
T65P1500S	1600-3000	1500	65	22500	2300	90	1.90	2000	125	250	500	200/4	250	500	10000	0.0170	21
T65P2000S	600-2000	2000	65	29400	3000	90	1.70	2000	125	300	500	200/4	250	500	10000	0.0170	21
T77P1650S	3600-4400	1650	70	26000	2800	250	2.55	5000	125	300	1000	200/4	400	250	10000	0.0120	22
T77P2100S	1200-1800	2100	70	38000	5500	100	1.55	2000	125	800	500	200/4	80	500	10000	0.0120	22
T77P2300S	2200-2700	2300	70	35000	5000	150	1.35	2000	125	300	500	200/4	400	100	10000	0.0120	22
T77P2500S	1200-2400	2500	65	45000	8500	150	1.90	7850	125	300	500	200/4	400	100	10000	0.0120	22
T77P3000S	800-1400	3000	65	45000	8500	150	1.15	2000	125	300	500	200/4	400	100	10000	0.0120	22
T77P3000S1	1200-2100	3000	70	55000	12500	150	1.10	2000	125	300	1000	200/4	400	100	10000	0.0120	22
TPF Series - Inverter Grade Fast Switching SCR Capsules²																	
T30P600F	500-1400	600	65	6000	150	40	2.50	1200	125	800	400	150/3	20	500	1000	0.0550	18
T38P900F	1500-2000	900	65	7800	250	50	2.50	2000	125	800	500	200/3	30	500	3000	0.0400	19
T38P1000F	500-1400	1000	65	10000	415	35	2.90	2000	125	800	500	200/3	40	500	3500	0.0400	19
T38P1150F	1500-2000	1150	65	9000	336	50	2.50	2300	125	800	500	200/3	55	500	3000	0.0400	19
T52P1700F	1500-2000	1700	65	20000	1660	65	2.20	3400	125	800	500	150/3	50	500	5500	0.0230	20
T52P2000F	500-1400	2000	65	16000	1060	65	2.60	4000	125	800	500	150/3	35	500	5500	0.0230	20
T65P2500F	600-1600	2500	65	24500	2500	90	1.90	3000	125	800	500	200/4	65	500	10000	0.0170	21
T65P2500F2	2200-2500	2500	65	40000	6800	100	2.25	4000	125	800	500	200/4	80	500	10000	0.0120	21
T77P3000F	2000-2800	3000	65	48000	8200	100	2.45	5000	125	800	500	200/4	75	500	16000	0.0085	22

Notes:

¹ Currents listed are Average values.

² Currents listed are RMS values.

³ Both Sides Cooled

* For specific Q_{RR} values, contact the factory.

All devices listed are RoHS compliant.

How to Order: CKE Part Number (first column) - Voltage Required (from range in second column - in 100 volt increments) Example: T30P600F800
A "-" indicates a component that is a standard recovery device and no T_{RR} data was taken.

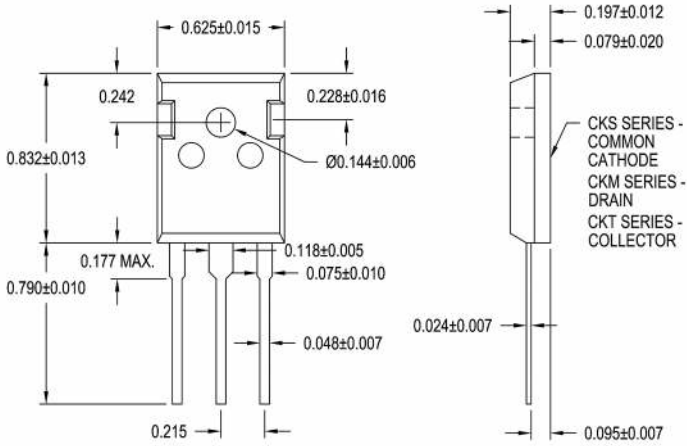


FIG 1 T0247 - B1B PACKAGE

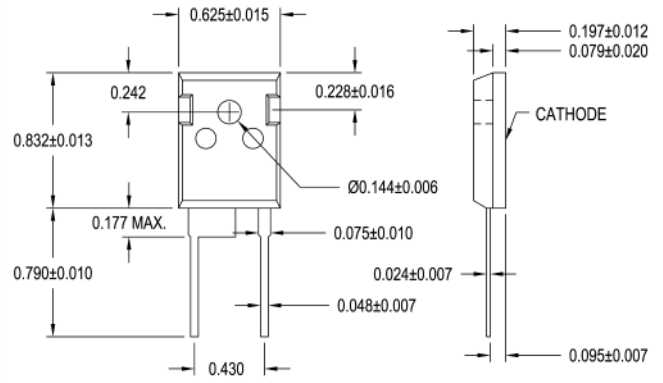


FIG 2 T0247 - B1C PACKAGE

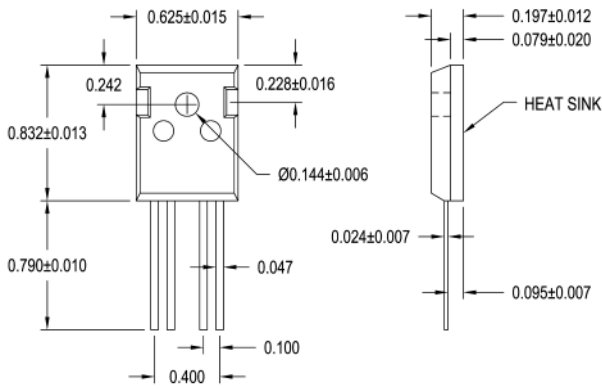


FIG 3 T0247 - B1D PACKAGE

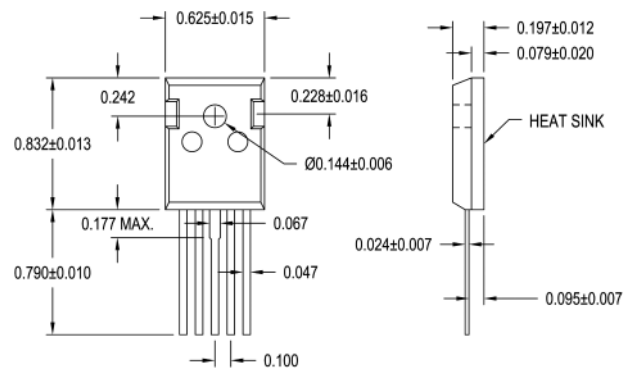


FIG 4 T0247 - B1E PACKAGE

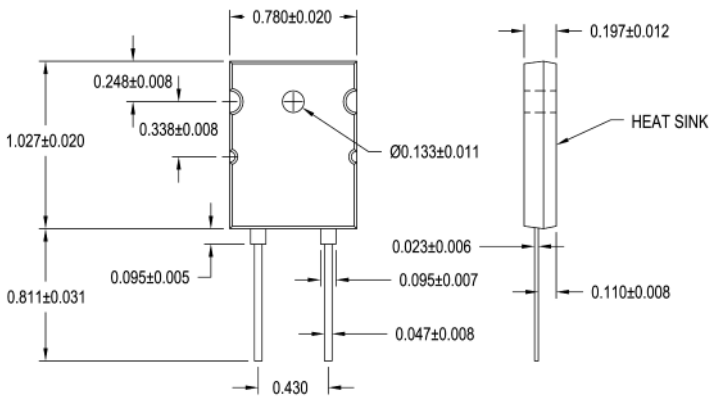


FIG 5 T0264 - C1A PACKAGE

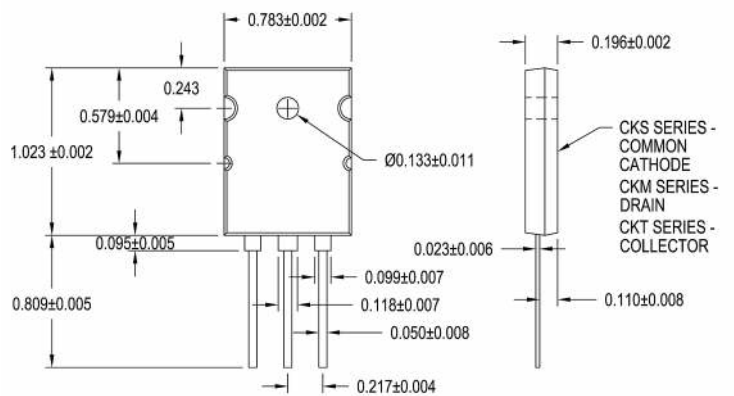


FIG 6 T0264 - C1B PACKAGE

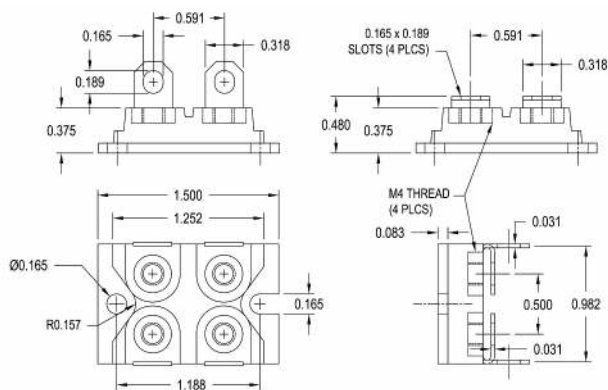


FIG 7 SOT227

E1D PACKAGE

D1D PACKAGE

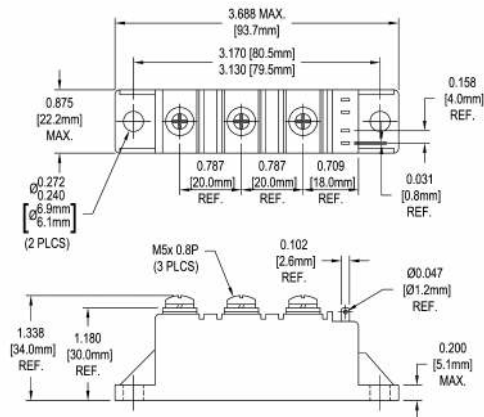


FIG 8

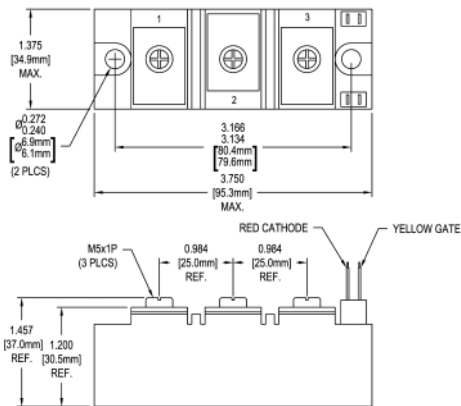


FIG 9

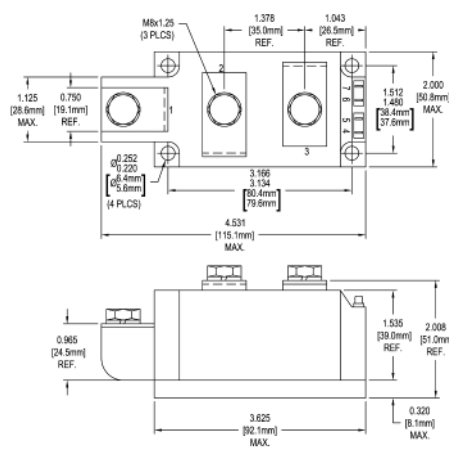


FIG 10

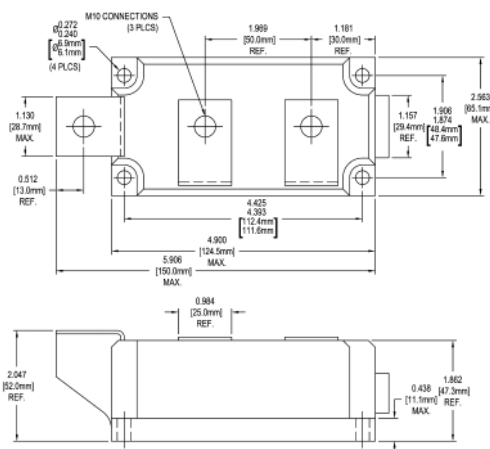


FIG 11

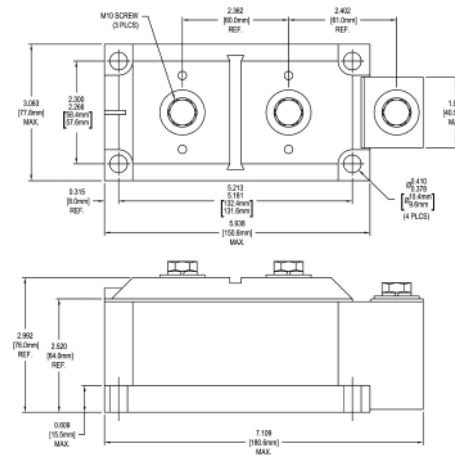


FIG 12

Diode Capsules

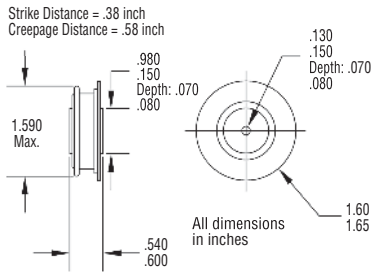


FIG 13 30mm PACKAGE

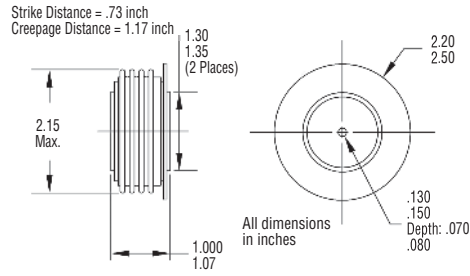


FIG 14 38mm PACKAGE

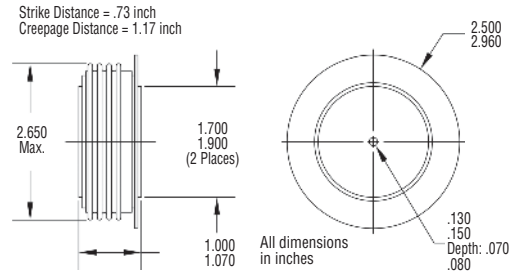


FIG 15 52mm PACKAGE

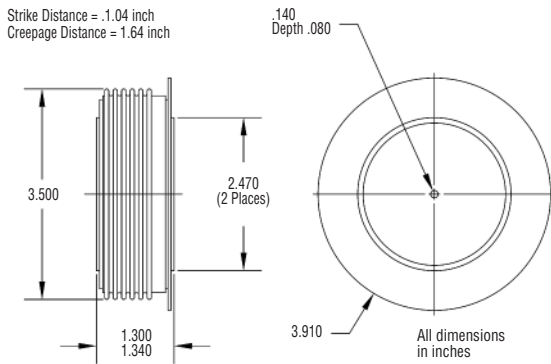


FIG 16 65mm PACKAGE

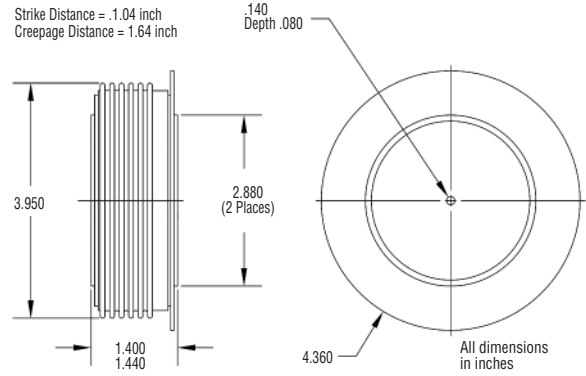


FIG 17 77mm PACKAGE

SCR Capsules

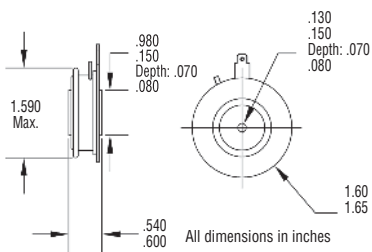
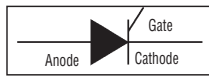


FIG 18 30mm PACKAGE

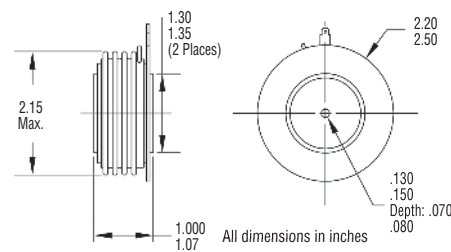


FIG 19 38mm PACKAGE

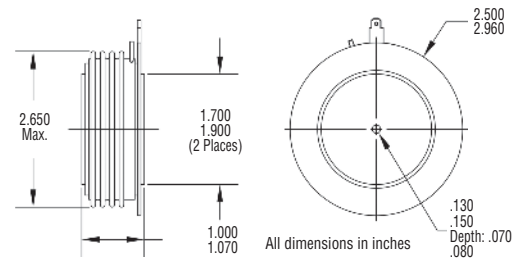


FIG 20 52mm PACKAGE

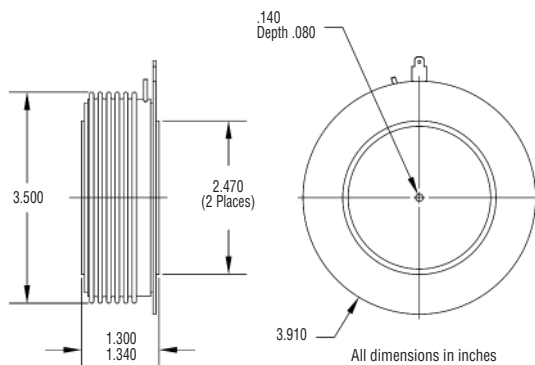


FIG 21 65mm PACKAGE

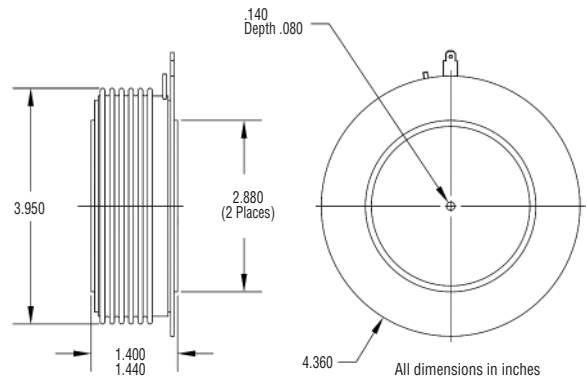


FIG 22 77mm PACKAGE

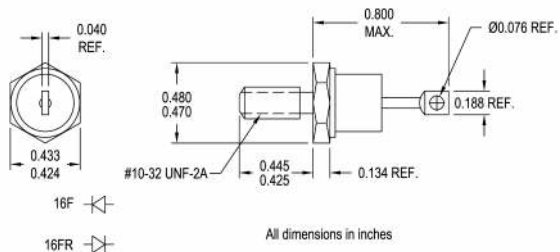


FIG 23 16F SERIES

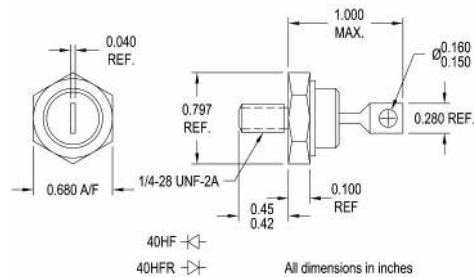


FIG 24 40HF SERIES

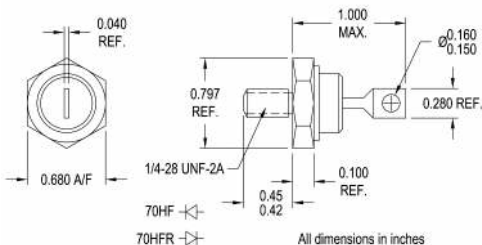


FIG 25 70HF SERIES

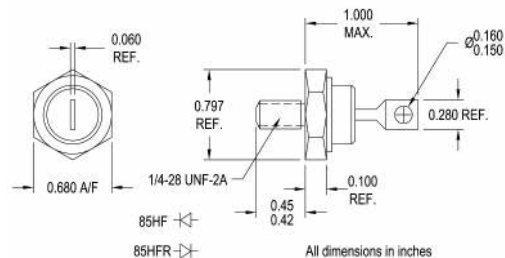


FIG 26 85HF SERIES

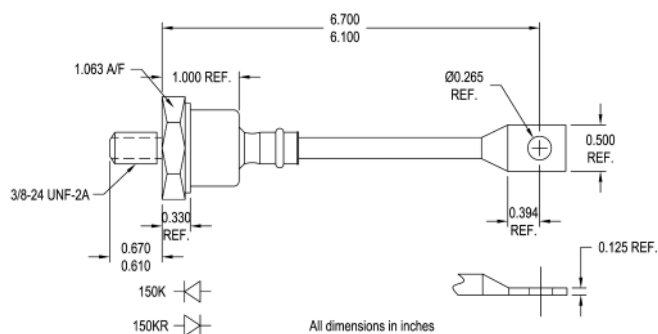


FIG 27 150K SERIES

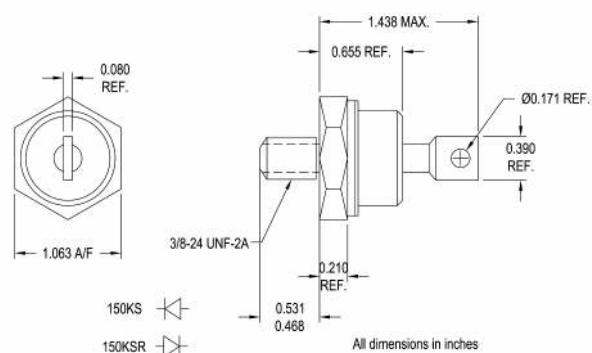


FIG 28 150KS SERIES

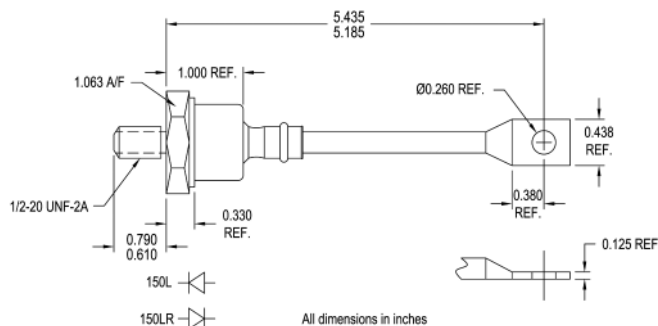


FIG 29 150L SERIES

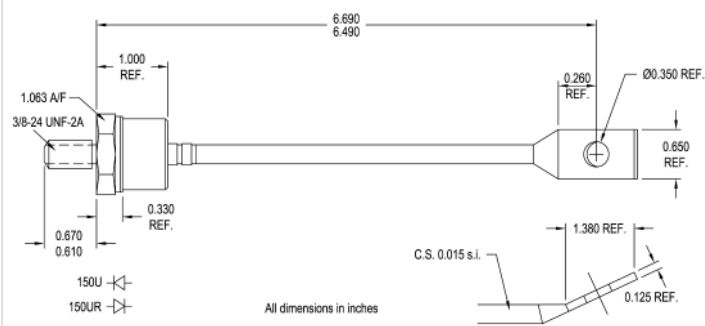


FIG 30 150U SERIES

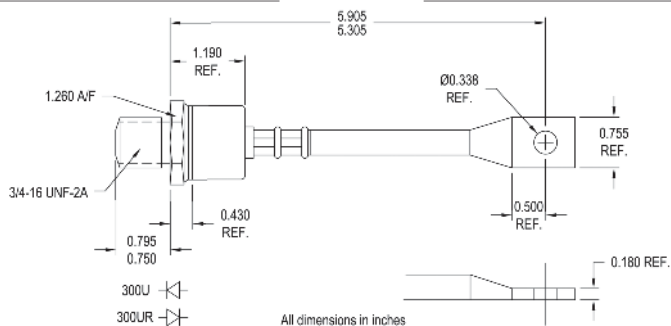
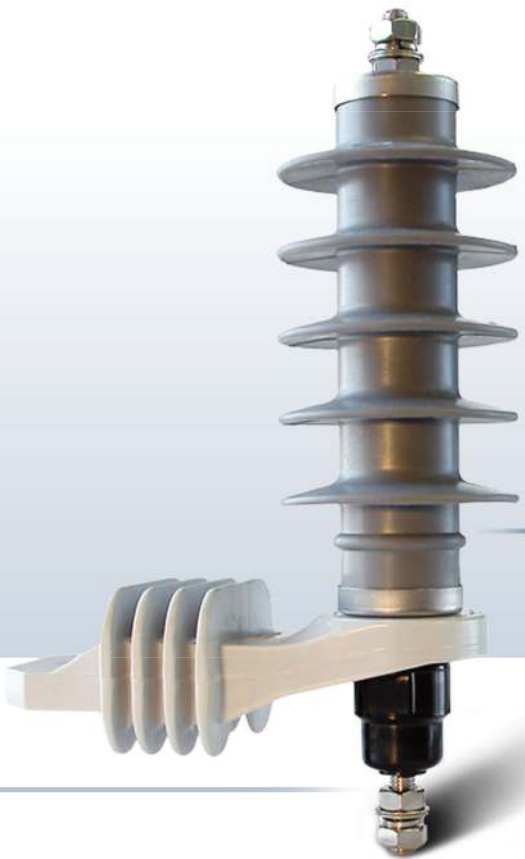


FIG 31 300U SERIES

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