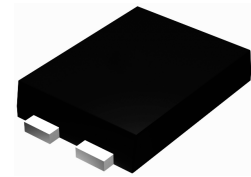


Features

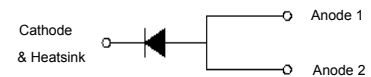
- Low leakage current
- Ideal for automated placement
- Low power loss, high efficiency
- High surge current capability
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard



TO-277

Mechanical Data

- Case: TO-277 package
- Terminals: Solderable per MIL-STD-750, method 2026



Schematic Diagram

Absolute Maximum Ratings (T_A=25°C unless otherwise noted)

Parameter	Symbol	Value	Units
Maximum Repetitive Peak Reverse Voltage	V _{RRM}	150	V
Maximum RMS Voltage	V _{RMS}	105	V
Maximum DC Blocking Voltage	V _{DC}	150	V
Maximum Average Forward Rectified Current	I _{F(AV)}	15	A
Peak Forward Surge Current, 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I _{FSM}	300	A
Typical Junction Capacitance Measured at 1MHz and Applied V _R =4V	C _J	350	pF
Typical Thermal Resistance, Junction to Ambient ¹	R _{θJA}	65	°C/W
Typical Thermal Resistance, Junction to Case ²	R _{θJC}	18	
Operating Junction Temperature Range	T _J	-55 to +175	°C
Storage Temperature Range	T _{STG}	-55 to +175	°C

Electrical Characteristics (T_A=25°C unless otherwise noted)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Units
Forward Voltage	V _F	I _F =1A, T _J =25°C	-	0.56	-	V
		I _F =5A, T _J =25°C	-	0.72	-	
		I _F =15A, T _J =25°C	-	0.8	0.85	
		I _F =1A, T _J =125°C	-	0.47	-	
		I _F =5A, T _J =125°C	-	0.59	-	
		I _F =15A, T _J =125°C	-	0.69	-	
Reverse Current ³	I _R	V _R =120V, T _J =25°C	-	0.1	-	uA
		V _R =150V, T _J =25°C	-	-	0.8	
		V _R =150V, T _J =125°C	-	55	450	

Note:

1. Mounted on a FR4 PCB, single-sided copper, standard footprint.
2. Mounted on a FR-4 PCB, single-sided copper, with 100cm² copper pad area.
3. Short duration pulse test used to minimize self-heating effect.

Typical Characteristics Curves

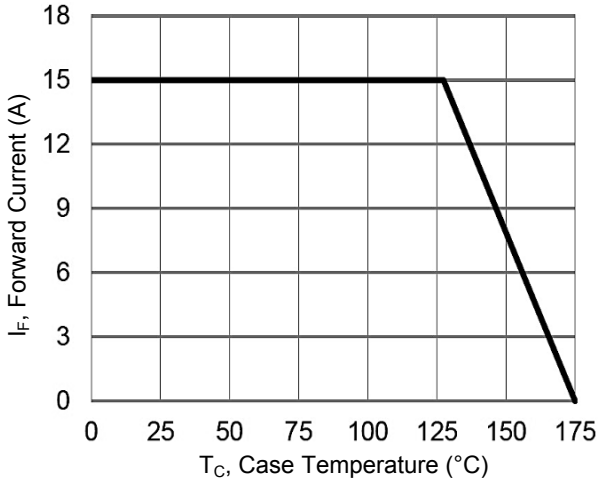


Figure 1. Forward Current Derating Curve

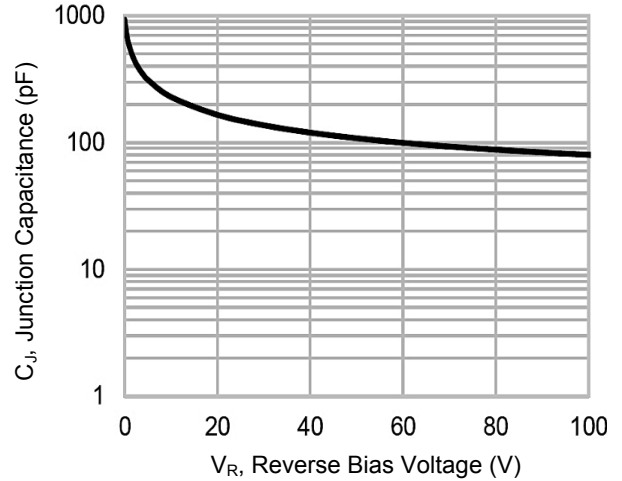


Figure 2. Typical Junction Capacitance

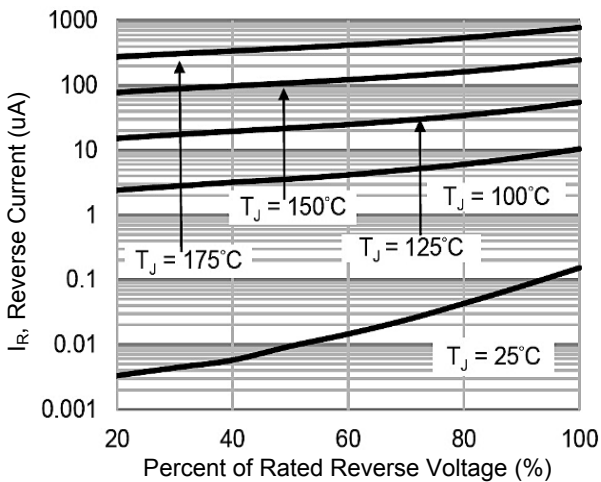


Figure 3. Typical Reverse Characteristics

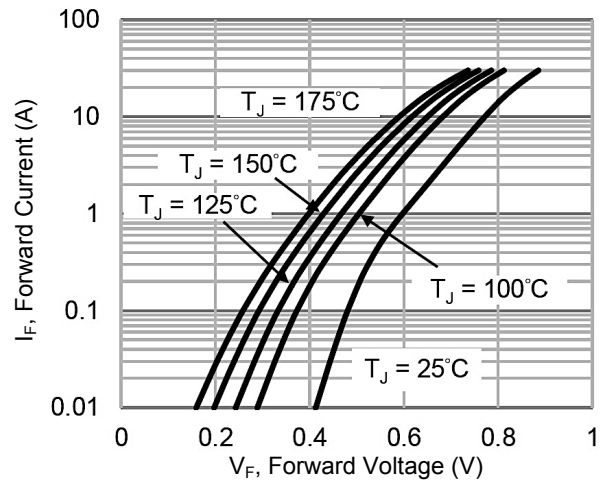
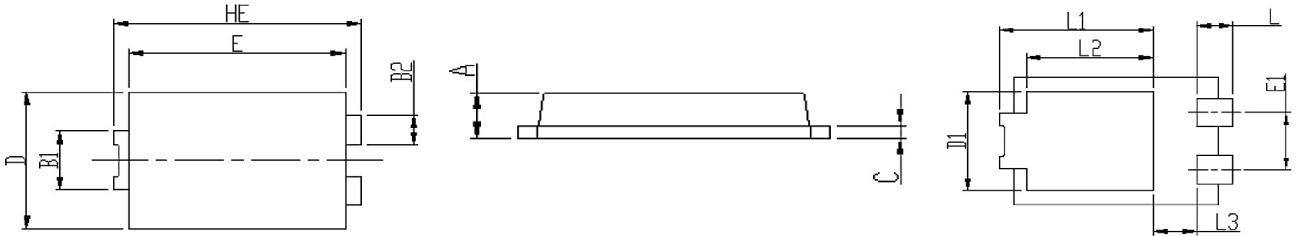


Figure 4. Typical Forward Characteristics

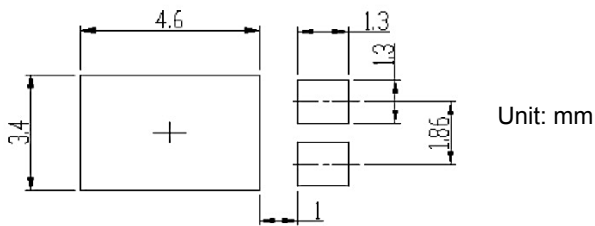


Package Outline Dimensions (TO-277)



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
HE	6.40	6.60	0.252	0.260
E	5.60	5.80	0.220	0.228
D	4.10	4.30	0.161	0.169
B1	1.70	1.90	0.067	0.075
B2	0.80	1.00	0.031	0.039
A	1.05	1.20	0.041	0.047
C	0.25	0.40	0.010	0.016
L	0.85	1.10	0.033	0.043
L1	4.20	4.40	0.165	0.173
L2	3.52 Typ		0.139 Typ	
L3	1.10	1.40	0.043	0.055
D1	3.00	3.30	0.118	0.130
E1	1.86 Typ		0.073 Typ	

Recommended Pad Layout



Order Information

Device	Package	Marking	Carrier	Quantity
GSK15PC150	TO-277	PC150	Tape & Reel	5,000 Pcs / Reel