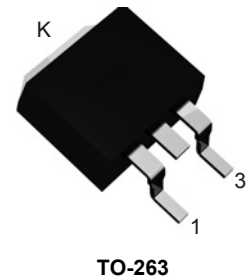


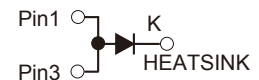
Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Metal silicon junction, majority carrier conduction
- Guard ring for overvoltage protection
- Low power loss, high efficiency
- High current capability, low forward voltage drop
- High surge capability
- High temperature soldering guaranteed: 260°C/10 seconds at terminals
- Component in accordance to RoHS 2015/863/EU



Mechanical Data

- Case: JEDEC TO-263 molded plastic body
- Terminals: Lead solderable per MIL-STD-750, method 2026
- Polarity: As marked
- Mounting position: Any



Schematic Diagram

Applications

For use in low voltage, high frequency inverters, DC/DC converters, free wheeling, and polarity protection applications

Maximum Ratings (T_A=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Maximum Repetitive Peak Reverse Voltage	V _{RRM}	45	V
Maximum RMS Voltage	V _{RMS}	32	V
Maximum DC Blocking Voltage	V _{DC}	45	V
Maximum Average Forward Rectified Current (See Fig.1)	I _{F(AV)}	16.0	A
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method)	I _{FSM}	150	A
Typical Thermal Resistance ²	R _{θJC}	1.50	°C/W
Operating Junction Temperature Range	T _J	-55 To +150	°C
Storage Temperature Range	T _{STG}	-55 To +150	°C

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

Parameter	Symbol	Typ.	Max.	Unit	
Forward Voltage at 16A ¹	V _F	0.54	0.60	V	
Maximum Instantaneous Reverse Current at Rated DC Blocking Voltage ¹	I _R	T _J =25°C	-	100	uA
		T _J =100°C	-	35	mA

Notes:

- Pulse test: 300µs pulse width, 1% duty cycle
- Thermal resistance from junction to case

Ratings and Characteristics Curves

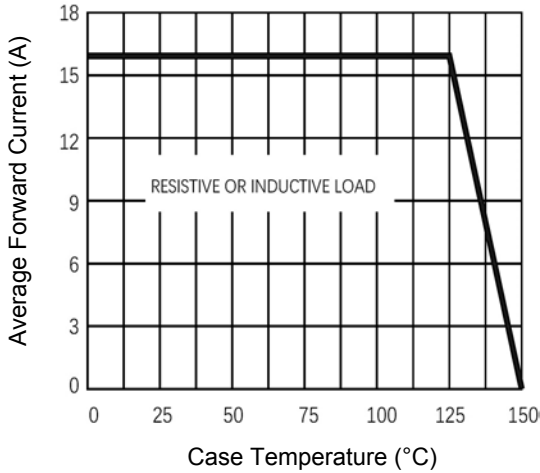


Figure 1. Forward Current Derating Curve

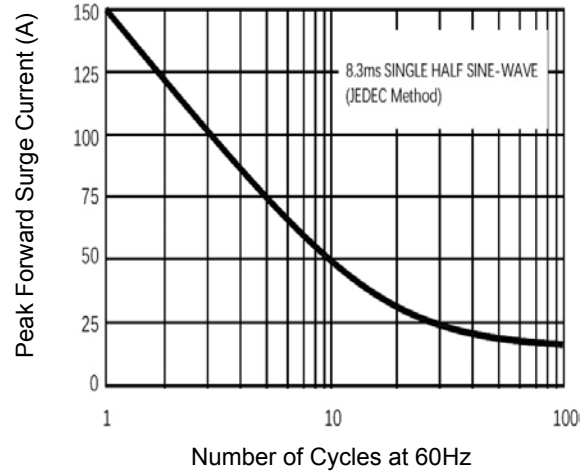


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

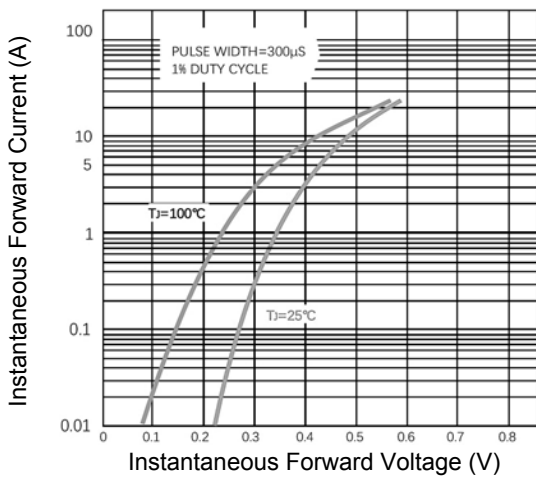


Figure 3. Typical Instantaneous Forward Characteristics

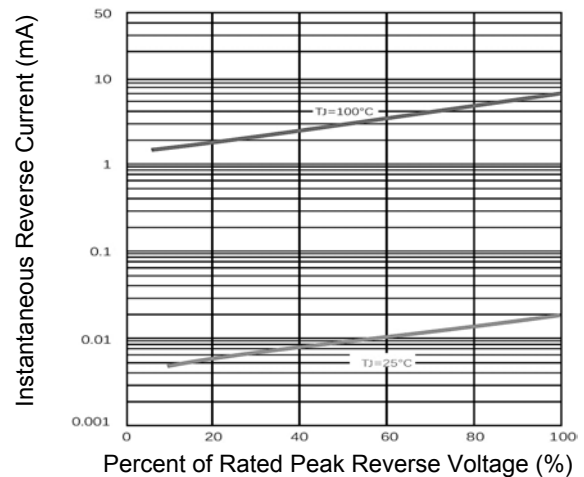
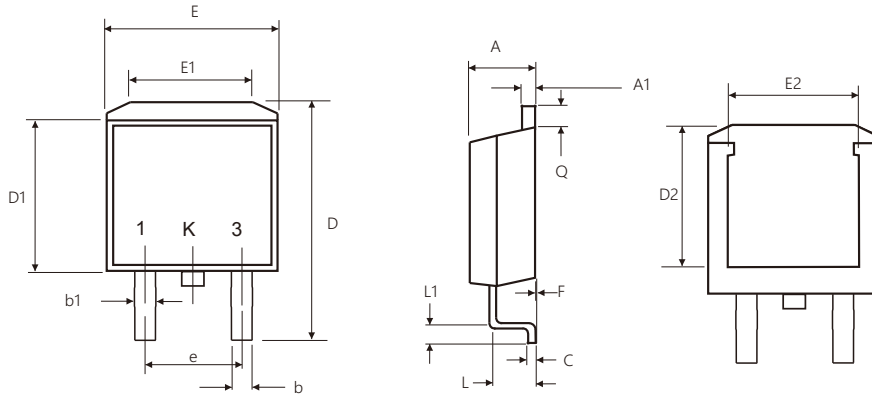


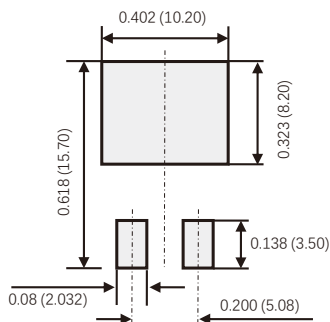
Figure 4. Typical Reverse Characteristics

Package Outline Dimensions (TO-263)



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	4.06	4.83	0.160	0.190
A1	1.14	1.40	0.045	0.055
e	4.98	5.18	0.196	0.204
b	0.69	0.94	0.027	0.037
b1	1.20	1.34	0.047	0.053
C	0.35	0.46	0.014	0.018
D	14.22	16.22	0.560	0.639
D1	8.13	9.14	0.320	0.360
E	9.65	10.67	0.380	0.420
E1	6.22	-	0.245	-
L	2.67	3.40	0.105	0.134
L1	2.29	3.32	0.090	0.131
Q	0.92	1.68	0.036	0.066
F	0.02	0.30	0.001	0.012
D2	7.20	7.80	0.283	0.307
E2	7.60	8.20	0.299	0.323

Recommended Pad Layout



Unit: inches (mm)

Order Information

Device	Package	Marking	Carrier	Quantity
GSR1645D3	TO-263	SR1645D3	Tape & Reel	800 Pcs / Reel

For more information, please contact us at: inquiry@goodarksemi.com