



SBG1630CT - SBG1645CT

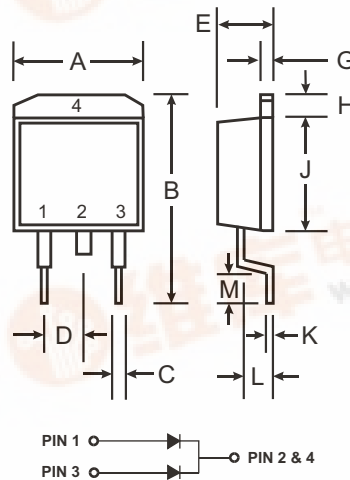
16A SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

Features

Guard Ring Die Construction for Transient Protection
 Low Power Loss, High Efficiency
 High Surge Capability
 High Current Capability and Low Forward Voltage Drop
 Surge Overload Rating to 175A Peak
 For Use in Low Voltage, High Frequency Inverters, Free Wheeling, and Polarity Protection Applications
Lead Free Finish/RoHS Compliant (Note 3)

Mechanical Data

Case: D²PAK
 Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
 Moisture Sensitivity: Level 1 per J-STD-020C
 Terminals: Finish - Tin. Solderable per MIL-STD-202, Method 208 **(e3)**
 Ordering Information on Page 2
 Polarity: See Diagram
 Marking: Type Number
 Weight: 1.7 grams (approximate)



D ² PAK		
Dim	Min	Max
A	9.65	10.69
B	14.60	15.88
C	0.51	1.14
D	2.29	2.79
E	4.37	4.83
G	1.14	1.40
H	1.14	1.40
J	8.25	9.25
K	0.30	0.64
L	2.03	2.92
M	2.29	2.79
All Dimensions in mm		

Maximum Ratings and Electrical Characteristics @ T_A = 25 °C unless otherwise specified

Single phase, half wave, 60Hz, resistive or inductive load.
 For capacitive load, derate current by 20%.

Characteristic	Symbol	SBG 1630CT	SBG 1635CT	SBG 1640CT	SBG 1645CT	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage (Note 4)	V _{RRM} V _{RWM} V _R	30	35	40	45	V
RMS Reverse Voltage	V _{R(RMS)}	21	25	28	32	V
Average Rectified Output Current @ T _C = 95 °C	I _O	16				A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load	I _{FSM}	175				A
Forward Voltage, per Element @ I _F = 8.0A	V _{FM}	0.55				V
Peak Reverse Current @ T _j = 25 °C at Rated DC Blocking Voltage (Note 4) @ T _j = 125 °C	I _{RM}	1.0 50				mA
Typical Total Capacitance (Note 2)	C _T	275				pF
Typical Thermal Resistance Junction to Case (Note 1)	R _{JC}	3.0				°C/W
Operating and Storage Temperature Range	T _j , T _{STG}	-65 to +125				°C

- Notes:
1. Thermal resistance: junction to case mounted on heat sink.
 2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC, per element.
 3. RoHS revision 13.2.2003. High Temperature Solder Exemption Applied, see EU Directive Annex Note 7.
 4. Short duration pulse test used to minimize self-heating effect.

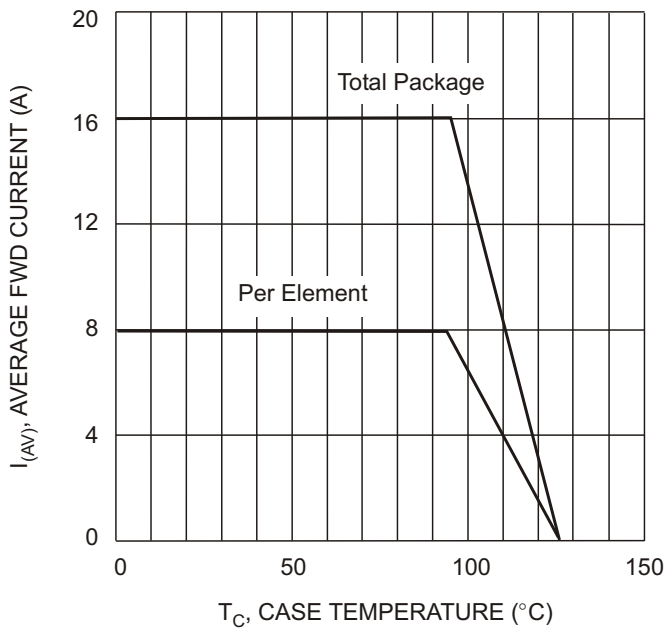


Fig. 1 Forward Current Derating Curve

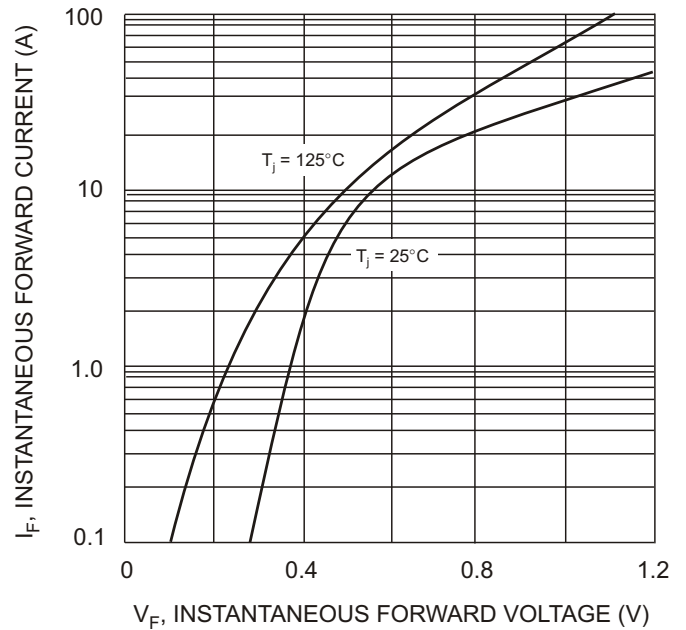


Fig. 2 Typical Forward Characteristics, Per Element

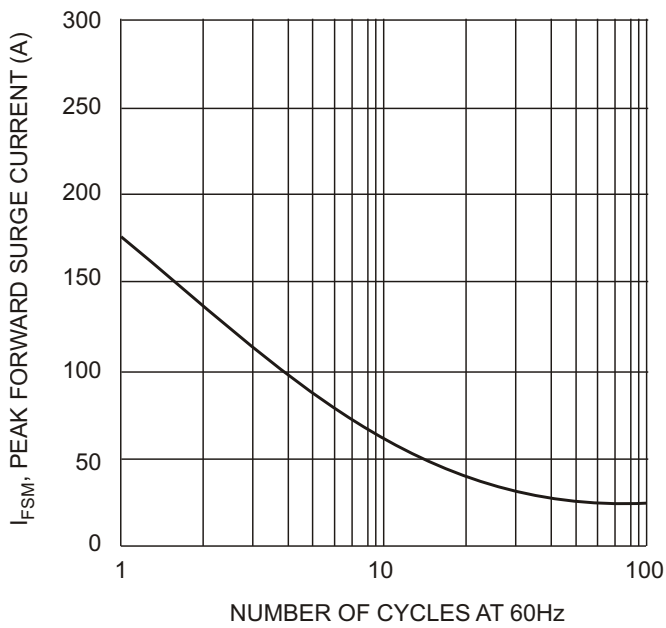


Fig. 3 Max Non-Repetitive Surge Current

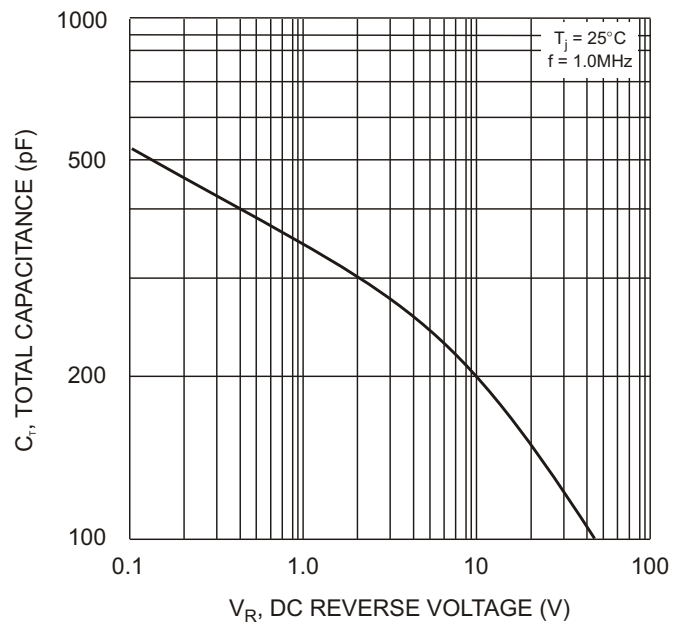


Fig. 4 Typical Total Capacitance, Per Element

Ordering Information (Note 5)

Device	Packaging	Shipping
SBG1630CT-T-F	D ² PAK	800/Tape & Reel, 13-inch
SBG1635CT-T-F	D ² PAK	800/Tape & Reel, 13-inch
SBG1640CT-T-F	D ² PAK	800/Tape & Reel, 13-inch
SBG1645CT-T-F	D ² PAK	800/Tape & Reel, 13-inch

Notes: 5. For packaging details, visit our website at <http://www.diodes.com/datasheets/ap02007.pdf>.



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