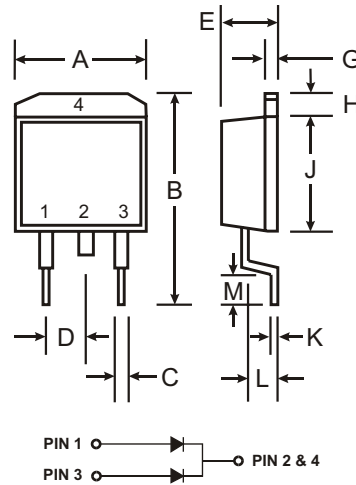


### Features

- Glass Passivated Die Construction
- Diffused Junction
- Super-Fast Recovery Times for High Efficiency
- High Current Capability and Low Forward Voltage Drop
- Surge Overload Rating to 100A Peak
- Low Reverse Leakage Current
- **Lead Free Finish, RoHS Compliant (Note 4)**

### Mechanical Data

- Case: D<sup>2</sup>PAK
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020C
- Terminals: Finish - Bright Tin. Solderable per MIL-STD-202, Method 208
- Polarity: See Diagram
- Marking: See Page 3
- Weight: 1.7 grams (approximate)



D <sup>2</sup> 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<sub>A</sub> = 25°C unless otherwise specified

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

Characteristic	Symbol	MURB1610CT	MURB1620CT	Unit
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>			
Working Peak Reverse Voltage	V <sub>RWM</sub>	100	200	V
DC Blocking Voltage	V <sub>R</sub>			
RMS Reverse Voltage	V <sub>R(RMS)</sub>	70	140	V
Average Rectified Output Current @ T <sub>C</sub> = 125°C	I <sub>O</sub>	16		A
Non-Repetitive Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	100		A
Forward Voltage @ I <sub>F</sub> = 8.0A	V <sub>FM</sub>	0.975		V
Peak Reverse Current @ T <sub>A</sub> = 25°C	I <sub>RM</sub>	5.0		μA
at Rated DC Blocking Voltage @ T <sub>A</sub> = 150°C		250		
Maximum Recovery Time (Note 2)	t <sub>rr</sub>	30		ns
Typical Total Capacitance (Note 3)	C <sub>T</sub>	85		pF
Typical Thermal Resistance Junction to Case	R <sub>θJC</sub>	1.5		°C/W
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-65 to +150		°C

- Notes:
1. Unit mounted on PC board with 5.0 mm<sup>2</sup> (0.013 mm thick) copper pad as heat sink.
  2. Measured with I<sub>F</sub> = 0.5A, I<sub>R</sub> = 1.0A, I<sub>rr</sub> = 0.25A.
  3. Measured at 1.0 MHz and Applied Reverse Voltage of 4.0V DC.
  4. RoHS revision 13.2.2003. Glass and High Temperature Solder Exemptions Applied, see EU Directive Annex Notes 5 and 7.

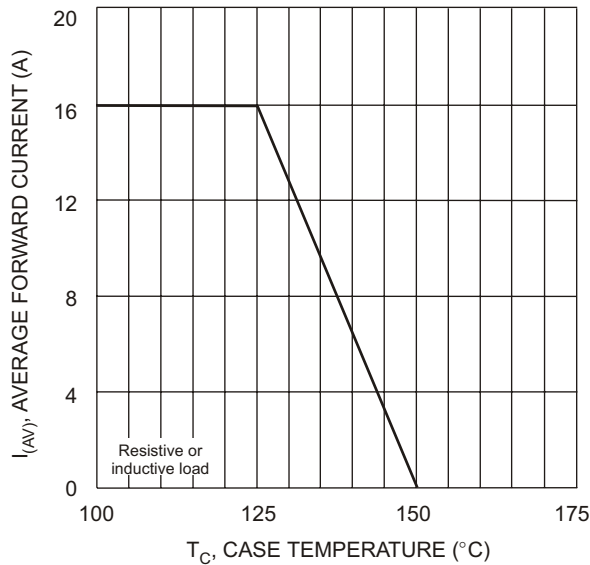


Fig. 1 Forward Current Derating Curve

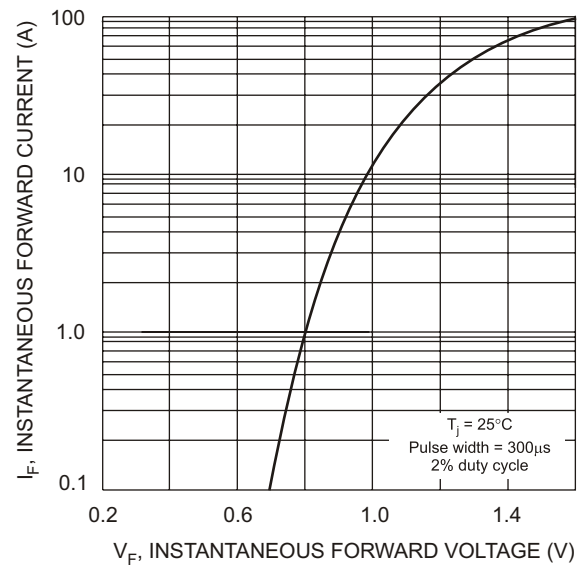


Fig. 2 Typical Forward Characteristics per Element

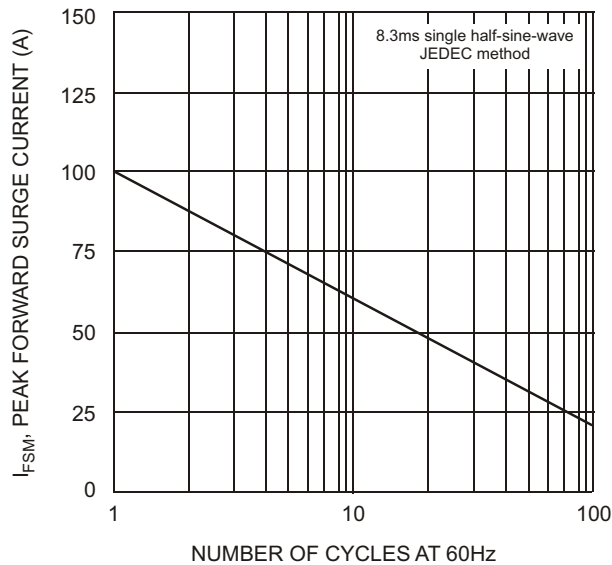


Fig. 3 Max Non-Repetitive Surge Current

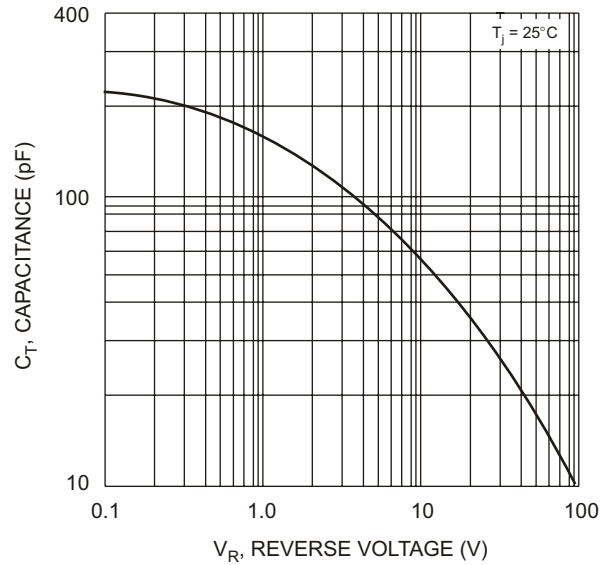


Fig. 4 Typical Total Capacitance per Element

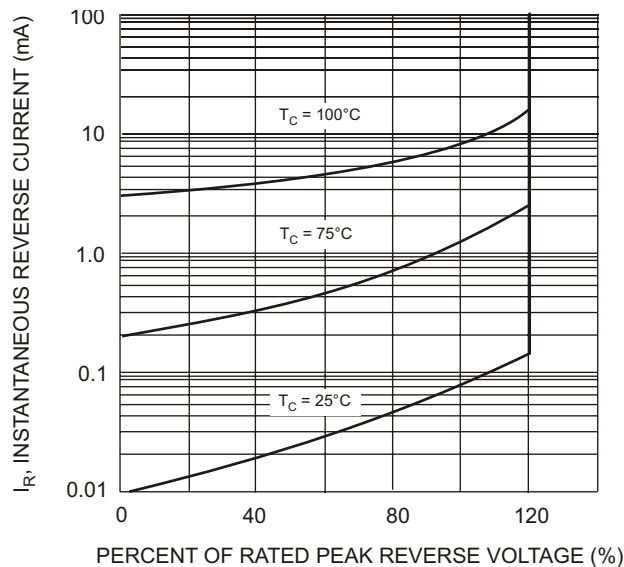
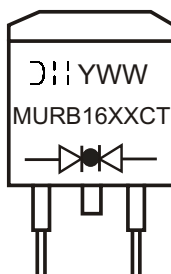


Fig. 5 Typical Reverse Characteristics

**Ordering Information** (Note 5)

Device	Packaging	Shipping
MURB1610CT-13	D <sup>2</sup> PAK	800/Tape & Reel
MURB1620CT-13	D <sup>2</sup> PAK	800/Tape & Reel

Notes: 5. For Packaging Details, go to our website at <http://www.diodes.com/datasheets/ap02007.pdf>.

**Marking Information**

MURB16XXCT = Product type marking code

DII = Manufacturers' code marking

YWW = Date code marking

Y = Last digit of year ex: 2 for 2002

WW = Week code 01 to 52