



### Features

- Lead Free Finish/RoHS Compliant
- Glass Passivated Chip
- High Surge Forward Current Capability
- Epoxy Meets UL 94 V-0 Flammability Rating
- Moisture Sensitivity Level 1

### Typical Applications

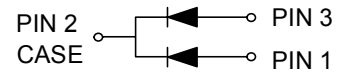
Typical applications are in switching power supplies, converters, freewheeling diodes, and reverse battery protection.

### Mechanical Data

- **Package:** TO-220C  
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** As marked



TO-220C  
(TO-220AB)



### Maximum Ratings (T<sub>a</sub>=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	1610CT	1615CT	1620CT	1640CT	1660CT
Device marking code			1610CT	1615CT	1620CT	1640CT	1660CT
Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	V	100	150	200	400	600
Average Rectified Output Current @60Hz half sine-wave, R-load, T <sub>c</sub> (FIG.1)	I <sub>o</sub>	A	18				
Surge(Non-repetitive)Forward Current @60Hz half sine-wave,1 cycle, T <sub>a</sub> =25°C	I <sub>FSM</sub>	A	100				
Storage Temperature	T <sub>stg</sub>	°C	-55 ~ +150				
Junction Temperature	T <sub>j</sub>	°C	-55 ~ +150				

### Electrical Characteristics (T<sub>a</sub>=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	1610CT	1615CT	1620CT	1640CT	1660CT
Maximum instantaneous forward voltage drop per diode	V <sub>FM</sub>	V	I <sub>FM</sub> =15A	0.975			1.30	1.50
Maximum DC reverse current at rated DC blocking voltage per diode	I <sub>RRM1</sub>	uA	V <sub>RM</sub> =V <sub>RRM</sub> T <sub>a</sub> =25°C	5			10	
	I <sub>RRM2</sub>		V <sub>RM</sub> =V <sub>RRM</sub> T <sub>a</sub> =125°C	250			500	
Reverse Recovery Time	T <sub>rr</sub>	ns	I <sub>F</sub> =0.5A I <sub>RM</sub> =1A I <sub>RR</sub> =0.25A	25			50	



### Characteristics (Typical)

Fig. 1 - Forward Current Derating Curve

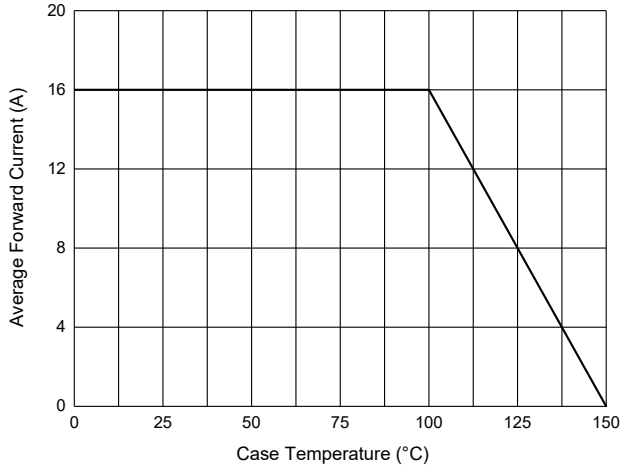


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

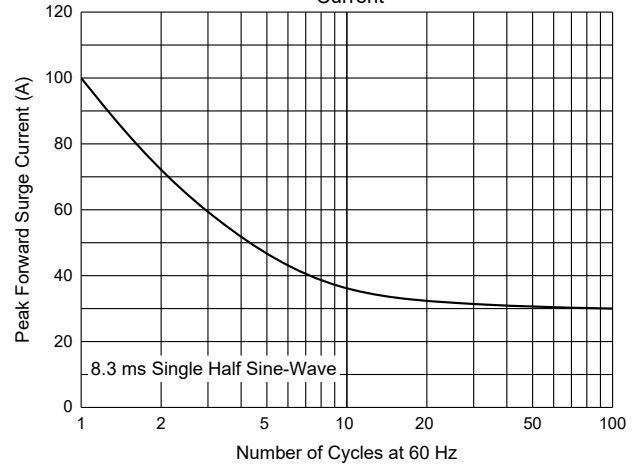


Fig. 3 - Typical Instantaneous Forward Characteristics

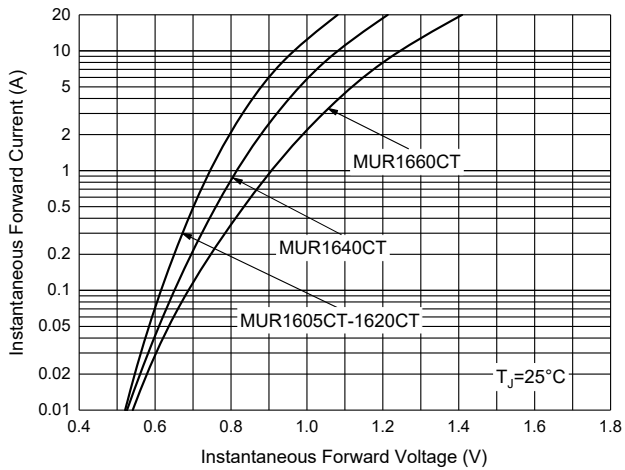
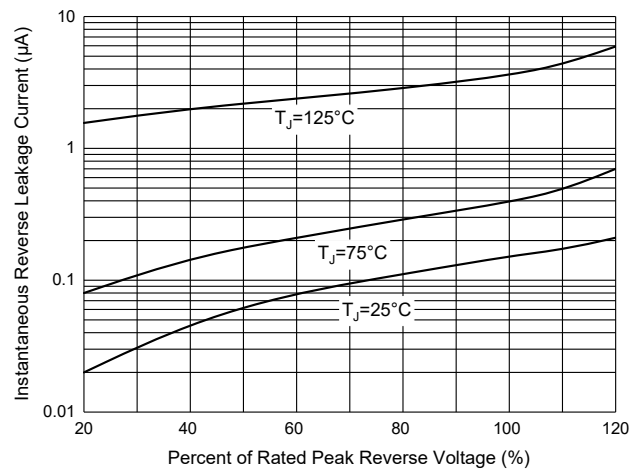
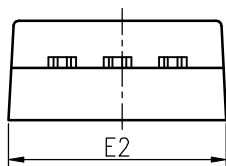
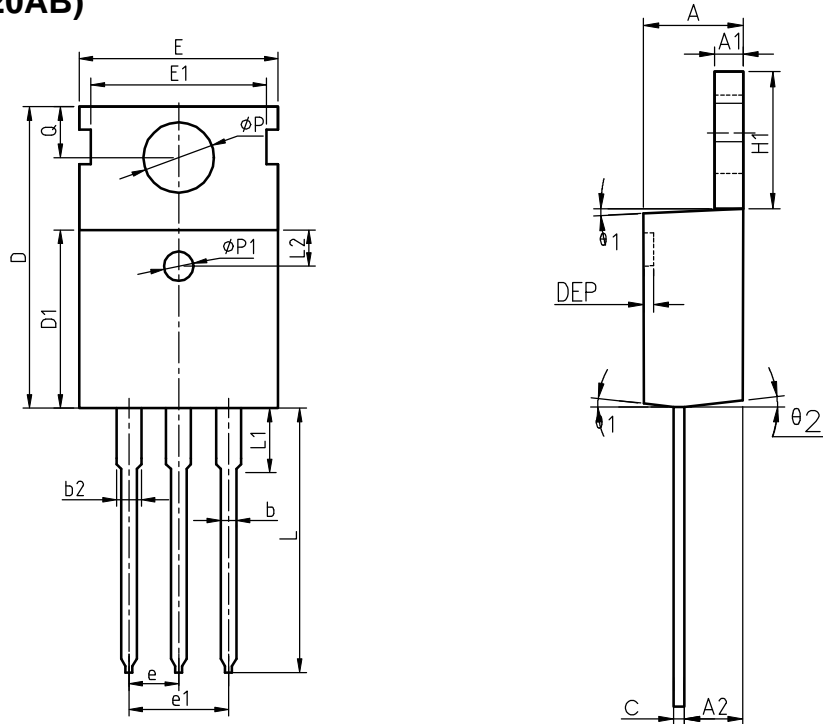


Fig. 4 - Typical Reverse Leakage Characteristics





**Package Information**  
**TO-220C(TO-220AB)**



COMMON DIMENSIONS

SYMBOL	MIN	NOM	MAX	MIN	NOM	MAX
A	4.40	4.57	4.70	0.173	0.180	0.185
A1	1.27	1.30	1.33	0.050	0.051	0.052
A2	2.35	2.40	2.50	0.093	0.094	0.098
b	0.77	0.80	0.90	0.030	0.031	0.035
b2	1.17	1.27	1.36	0.046	0.050	0.054
c	0.48	0.50	0.56	0.019	0.020	0.022
D	15.40	15.60	15.80	0.606	0.614	0.622
D1	9.00	9.10	9.20	0.354	0.358	0.362
DEP	0.05	0.10	0.20	0.002	0.004	0.008
E	9.80	10.00	10.20	0.386	0.394	0.402
E1	-	8.70	-	-	0.343	-
E2	9.80	10.00	10.20	0.386	0.394	0.402
e		2.54	BSC		0.100	BSC
e1		5.08	BSC		0.200	BSC
H1	6.40	6.50	6.60	0.252	0.256	0.260
L	12.75	13.50	13.65	0.502	0.531	0.537
L1	-	3.10	3.30	-	0.122	0.130
L2		2.50	REF		0.098	REF
P	3.50	3.60	3.63	0.138	0.142	0.143
P1	3.50	3.60	3.63	0.138	0.142	0.143
Q	2.73	2.80	2.87	0.107	0.110	0.113
theta 1	5°	7°	9°	5°	7°	9°
theta 2	1°	3°	5°	1°	3°	5°
theta 3	1°	3°	5°	1°	3°	5°



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