



# MURB1010CT~MURB1060CT

## ULTRAFAST RECOVERY RECTIFIERS

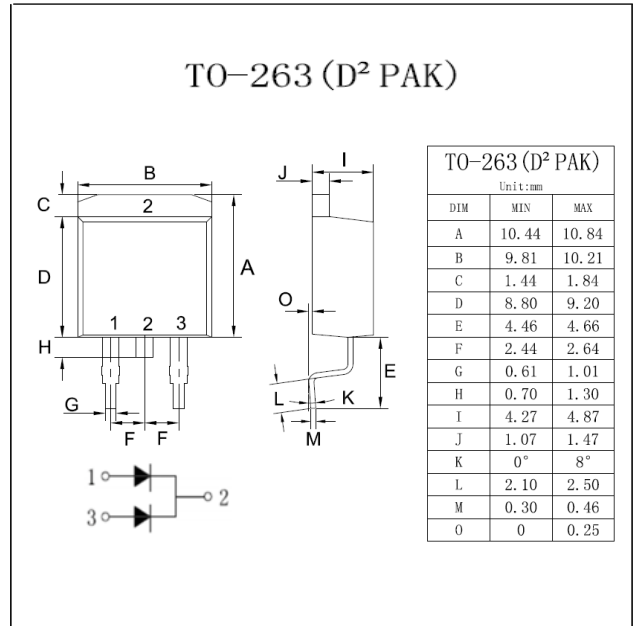
VOLTAGE	100 to 600 Volts
CURRENT	10 Amperes

### FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0. Flame Retardant Epoxy Molding Compound.
- Low power loss, high efficiency.
- Low forward voltage, high current capability.
- High surge capability
- Ultra fast recovery time, high voltage.
- Lead free in comply with EU RoHS.

### MECHANICAL DATA

- Case: TO-263AB molded plastic
- Terminals: solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: As marked.
- Mounting Position: Any



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%

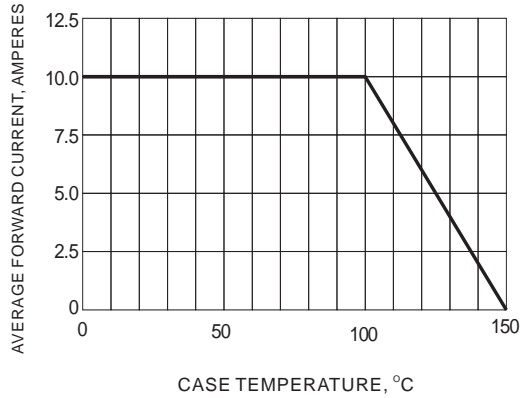
PARAMETER	SYMBOL	MURB 1010CT	MURB 1020CT	MURB 1030CT	MURB 1040CT	MURB 1050CT	MURB 1060CT	UNITS
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	100	200	300	400	500	600	V
Maximum RMS Voltage	$V_{RMS}$	70	140	210	280	350	420	V
Maximum DC Blocking Voltage	$V_{DC}$	100	200	300	400	500	600	V
Maximum Average Forward Current at $T_c = 100^\circ\text{C}$	$I_{F(AV)}$	10						A
Peak Forward Surge Current : 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	90						A
Maximum Forward Voltage at 5A	$V_F$	1		1.3		1.7		V
Maximum DC Reverse Current at Rated DC Blocking Voltage $T_j=25^\circ\text{C}$ $T_j=125^\circ\text{C}$	$I_R$			10		500		$\mu\text{A}$
Typical Junction Capacitance (Note 1)	$C_j$			40				pF
Maximum Reverse Recovery Time (Note 2)	$t_{rr}$			35				ns
Typical Thermal Resistance (Note 3)	$R_{\theta JC}$			3.5				$^\circ\text{C} / \text{W}$
Operating Junction and Storage Temperature Range	$T_j, T_{STG}$			-55 to +150				$^\circ\text{C}$

#### NOTES:

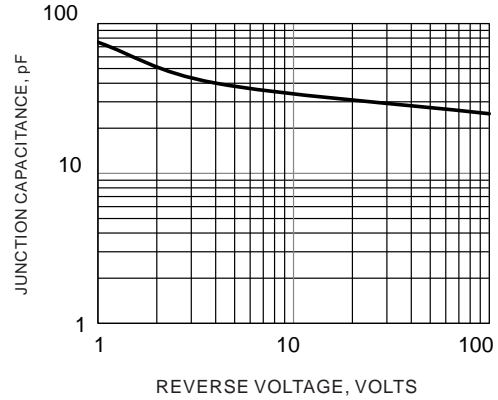
1. Measured at 1 MHz and applied reverse voltage of 4.0 VDC.
2. Reverse Recovery Test Conditions:  $I_F=0.5\text{A}$ ,  $I_R=1\text{A}$ ,  $I_{rr}=0.25\text{A}$ .
3. Thermal resistance from Junction to case.



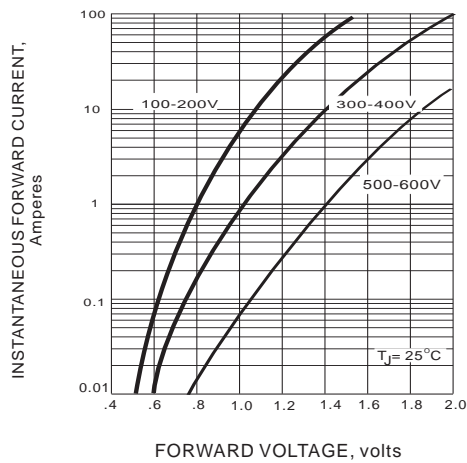
## RATING AND CHARACTERISTIC CURVES



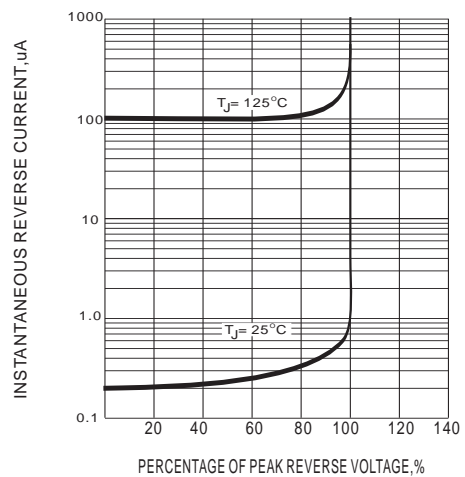
**Fig.1 FORWARD CURRENT DERATING CURVE**



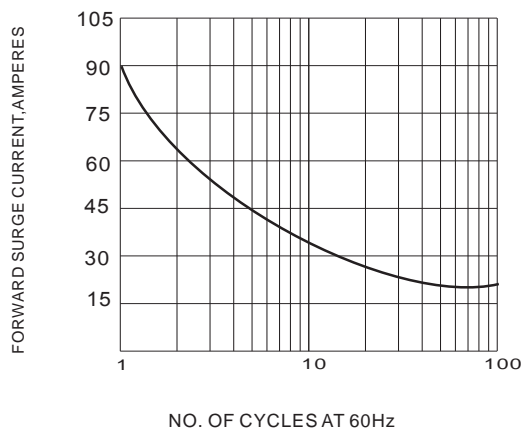
**Fig.2 TYPICAL JUNCTION CAPACITANCES**



**Fig.3 FORWARD CHARACTERISTICS**



**Fig.4 TYPICAL REVERSE CHARACTERISTICS**



**Fig.5 PEAK FORWARD SURGE CURRENT**