

MUR3005CT THRU MUR3060CT

KI SEMICONDUCTOR

ULTRA FSAT RECTIFIER
VOLTAGE RANGE 50 - 600 Volts
CURRENT 30 Amperes

FEATURES

- * Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- * Dual rectifier construction, positive centertap
- * Glass passivated chip junctions
- * Low power loss
- * Low forward voltage, high current capability
- * High surge current capability
- * Ultra fast recovery times for high efficiency
- * High temperature soldering guaranteed : 260°C/10 seconds at terminals

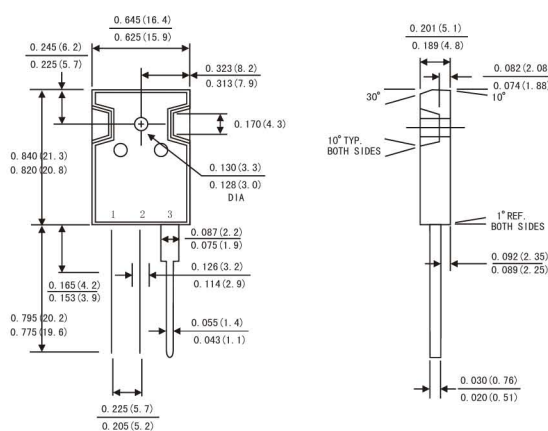
MECHANICAL DATA

Case: JEDEC TO-247 molded plastic
Terminals: Lead solderable per MIL-STD-750, Method 2026
Polarity: As marked
Weight: 5.6 grams (Approximately)

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%.

TO-247



Dimensions in inches and (millimeters)

MAXIMUM RATINGS (At $T_A = 25^\circ\text{C}$ unless otherwise noted)

RATINGS	SYMBOL	MUR3005CT	MUR3010CT	MUR3015CT	MUR3020CT	MUR3030CT	MUR3040CT	MUR3050CT	MUR3060CT	UNITS
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	150	200	300	400	500	600	Volts
Maximum RMS Voltage	V_{RMS}	35	70	105	140	210	280	350	420	Volts
Maximum DC Blocking Voltage	V_{DC}	50	100	150	200	300	400	500	600	Volts
Maximum Average Forward Rectified Current	I_o	30.0								Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	300								Amps
Typical Junction capacitance per leg (NOTE 1)	C_J	200				140				pF
Typical thermal resistance (NOTE 2)	$R_{\theta JC}$	1.0								$^\circ\text{C} / \text{W}$
Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +175								$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS (At $T_A = 25^\circ\text{C}$ unless otherwise noted)

CHARACTERISTICS	SYMBOL	MUR3005CT	MUR3010CT	MUR3015CT	MUR3020CT	MUR3030CT	MUR3040CT	MUR3050CT	MUR3060CT	UNITS
Maximum Instantaneous Forward Voltage at 15.0 A DC	V_F	0.975				1.30		1.50		Volts
Maximum DC reverse current at rated DC blocking voltage per leg	I_R	10.0								uAmps
	$T_C = 100^\circ\text{C}$	500								
Maximum reverse recovery time (NOTE 3) per leg	t_{rr}	35				50				nS

- NOTES : 1. Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts
 2. Thermal resistance from junction to case per leg mounted on heatsink
 3. Reverse recovery test conditions : $I_F = 0.5 \text{ A}$, $I_r = -1.0 \text{ A}$, $I_{rr} = -0.25 \text{ A}$
 4. Suffix " C " = Common Cathode, Suffix " A " = Common Anode, Suffix " D " = Double.

2001-6

RATING CHARACTERISTIC CURVES (MUR3005CT THRU MUR3060CT)

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

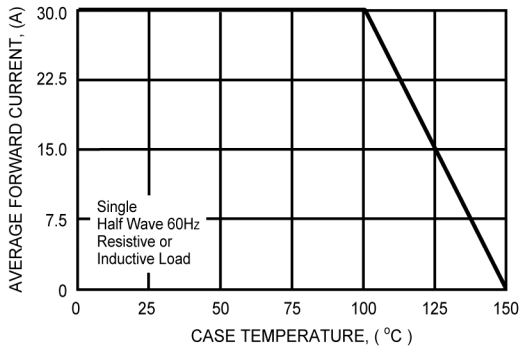


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

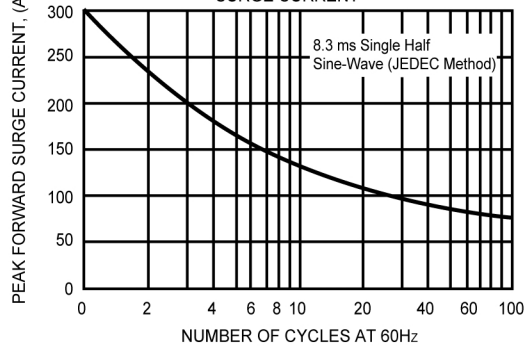


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

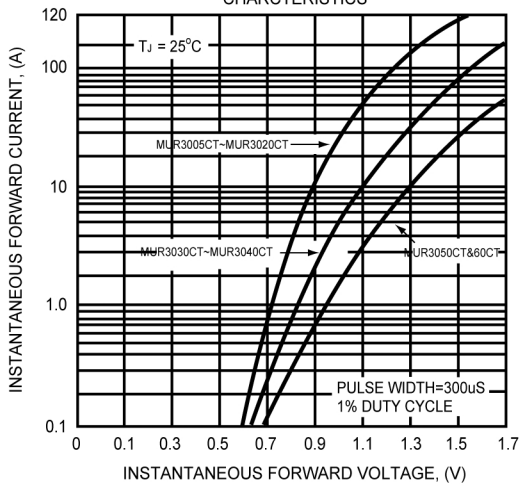


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

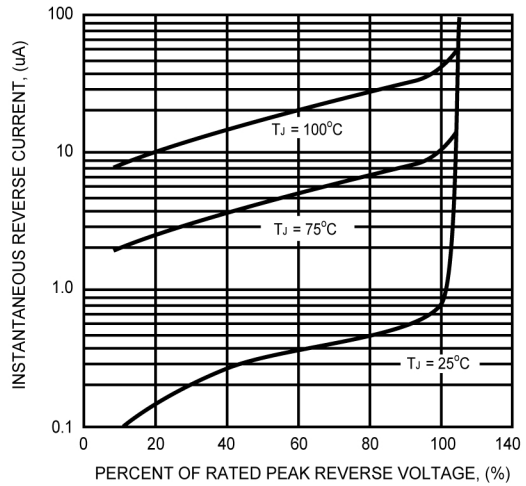


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

