

ULTRAFAST RECOVERY RECTIFIERS

FEATURES

- High speed switching capability
- High current capability
- High forward surge capability
- Low power losses, High efficiency
- High reliability
- For use in low voltage, high frequency inverters
- P/N suffix V means AEC-Q101 qualified, e.g MUR3060CV
- P/N suffix V means Halogen-free

APPLICATIONS

Fast recovery diode, mainly used for rectification, used in high-power equipment, The express and ultrafast recovery diodes are suitable for high frequency and ultra high frequency circuits, respectively

MECHANICAL DATA

- **Case:** Molded plastic
- **Polarity:** As marked
- **Mounting Position:** Any
- **Molded Plastic:** UL Flammability Classification Rating 94V-0
- Lead free in compliance with EU RoHS 2011/65/EU directive
- Solder bath temperature 275°C maximum, 10s per JESD 22-B106

Maximum Ratings (Per Leg) at Ta=25°C unless otherwise specified

Characteristics	Symbol	Value	Unit
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	600	V
Working Peak Reverse Voltage	V_{RWM}	600	V
Maximum DC Blocking Voltage	V_{DC}	600	V
Maximum Average Forward Rectified Current	Per Leg	15	A
	Total	30	
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave	I_{FSM}	250	A
Typical Current Square Time	$I^2 T$	260	A ² S
Operating Temperature Range	T_J	-40 to +150	°C
Storage Temperature Range	T_{STG}	-40 to +150	°C
Typical Thermal Resistance (Note1)	$R_{\theta JC}$	2	°C/W

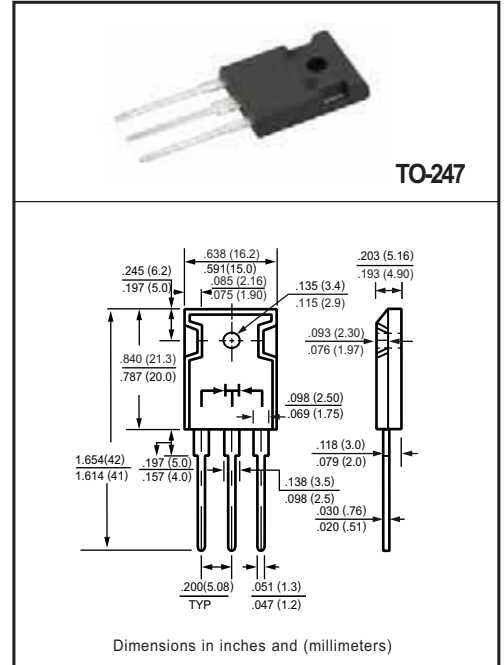
Note1: Thermal resistance from Junction to case per leg mounted on heatsink.

Electrical Characteristics (Per Leg) unless otherwise specified

Characteristics		Symbol	Value		Unit
Forward Voltage Drop(Note2)		V _F	Typ.	Max.	V
at I _F =3A	TA=25°C		0.92	-	
	TA=125°C		0.73	-	
at I _F =5A	TA=25°C		0.99	-	
	TA=125°C		0.80	-	
at I _F =15A	TA=25°C		1.20	1.59	
	TA=125°C		1.00	-	
Maximum Reverse Current at V _R =600V	TA=25°C	I _R	0.03	1	μA
	TA=125°C		11	-	μA
Maximum Reverse Recovery Time at I _F =0.5A, I _R =1A, I _{RR} =0.25A		T _{rr}	-	50	ns

Note2: Pulse test: 300 μs pulse width, 1 % duty cycle

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RATING AND CHARACTERISTICS CURVES (MUR3060C)

FIG. 1 MAXIMUM FORWARD CURRENT DERATING CURVE

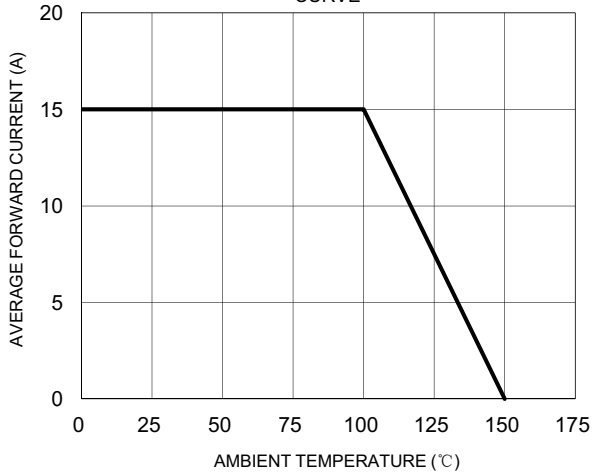


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

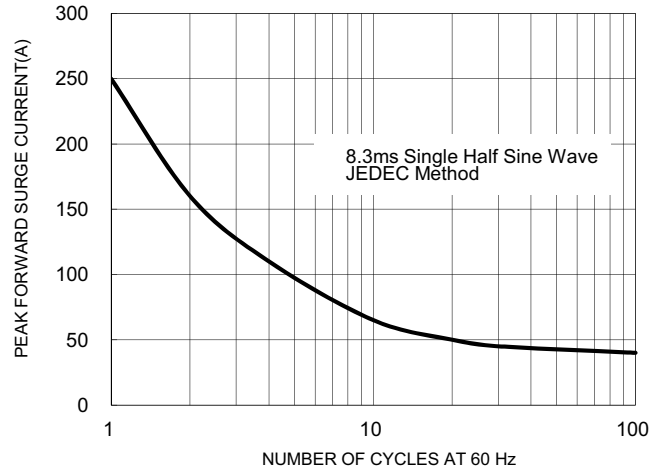


FIG. 3 TYPICAL FORWARD CHARACTERISTICS PER LEG

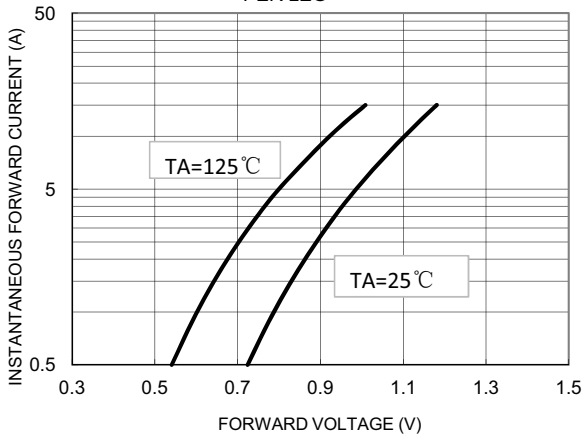
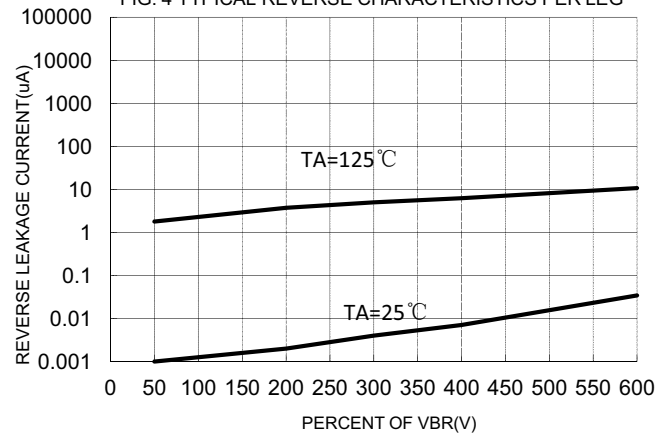
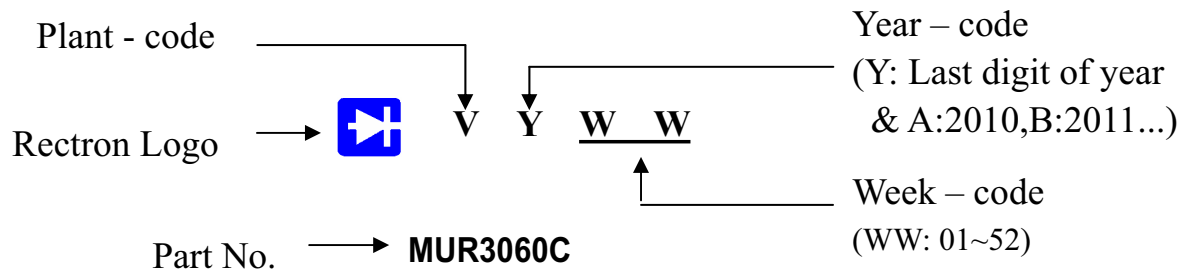


FIG. 4 TYPICAL REVERSE CHARACTERISTICS PER LEG



Marking Description



Ordering information

Code	Package	Unit Weight	Base Quantity	Delivery mode
-C	TO-247	0.209oz(5.93g)	30 pcs / tube	600pcs/box 2400pcs/carton

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