

ULTRAFAST RECOVERY RECTIFIERS

FEATURES

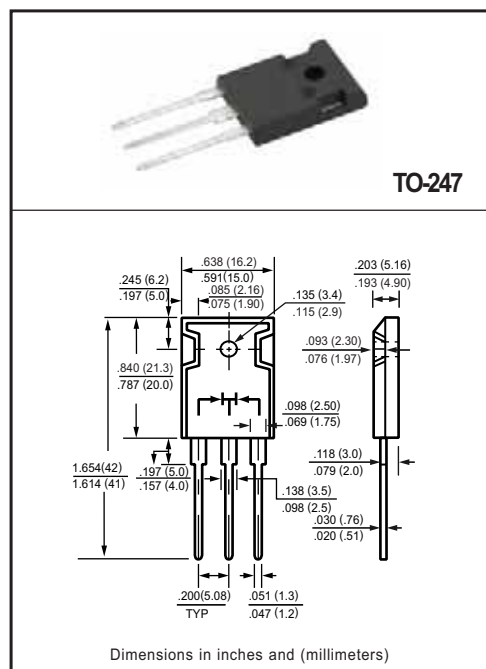
- High speed switching capability
- High current capability
- High forward surge capability
- Low power losses, High efficiency
- High reliability
- For use in low voltage, high frequency inverters
- P/N suffix V means AEC-Q101 qualified, e.g MUR20120CV
- P/N suffix V means Halogen-free

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 at Ta=25°C unless otherwise specified

Characteristics	Symbol	Value	Unit
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	1200	V
Working Peak Reverse Voltage	V_{RWM}	1200	V
Maximum DC Blocking Voltage	V_{DC}	1200	V
Maximum Average Forward Rectified Current	I_O	20	A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave	I_{FSM}	160	A
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 unless otherwise specified

Characteristics		Symbol	Value		Unit
Forward Voltage Drop (Note2)		V_F	Typ.	Max.	V
at $I_F=3A$	TA=25°C		1.41	-	
	TA=125°C		1.03	-	
at $I_F=5A$	TA=25°C		1.58	-	
	TA=125°C		1.18	-	
at $I_F=15A$	TA=25°C		2.03	2.19	
	TA=125°C		1.62	-	
Maximum Reverse Current at $V_R=400V$	TA=25°C	I_R	0.1	1	μA
	TA=125°C		30	-	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

RATING AND CHARACTERISTICS CURVES (MUR20120C)

FIG.1 MAXIMUM FORWARD CURRENT DERATING CURVE

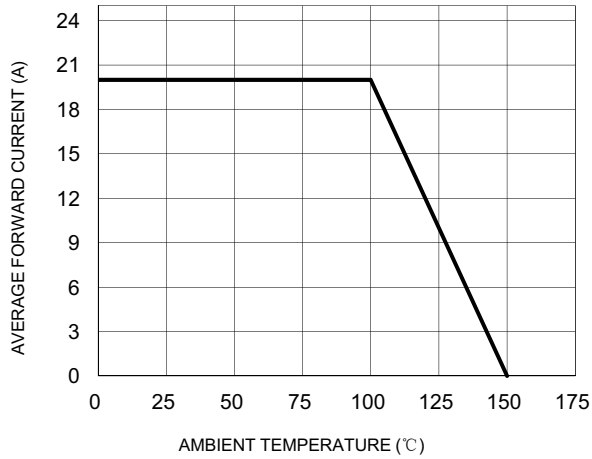


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

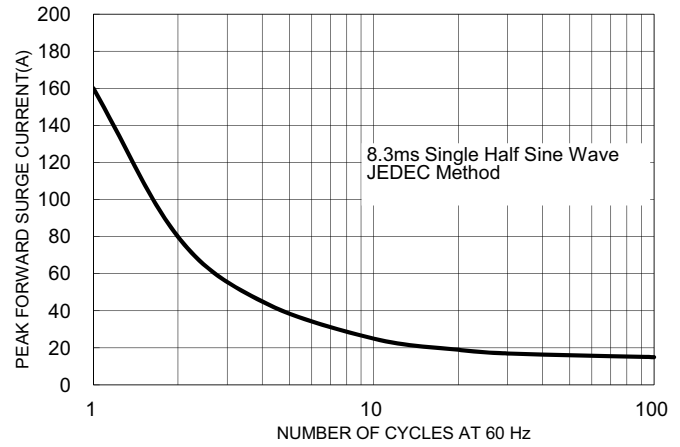


FIG. 3 TYPICAL FORWARD CHARACTERISTICS PER LEG

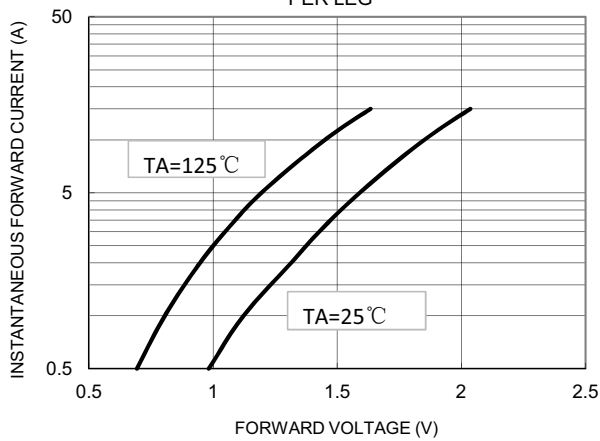
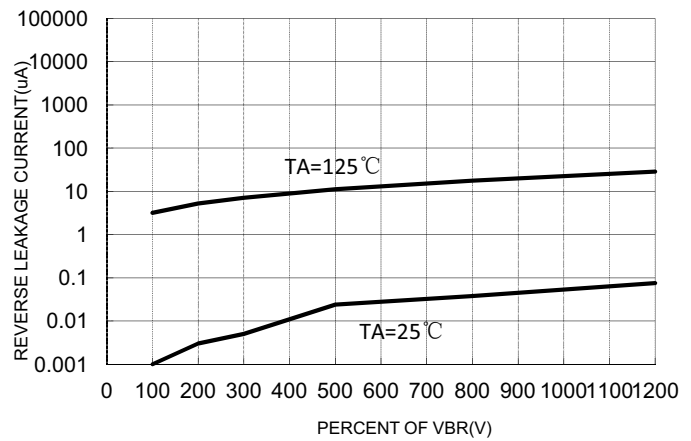
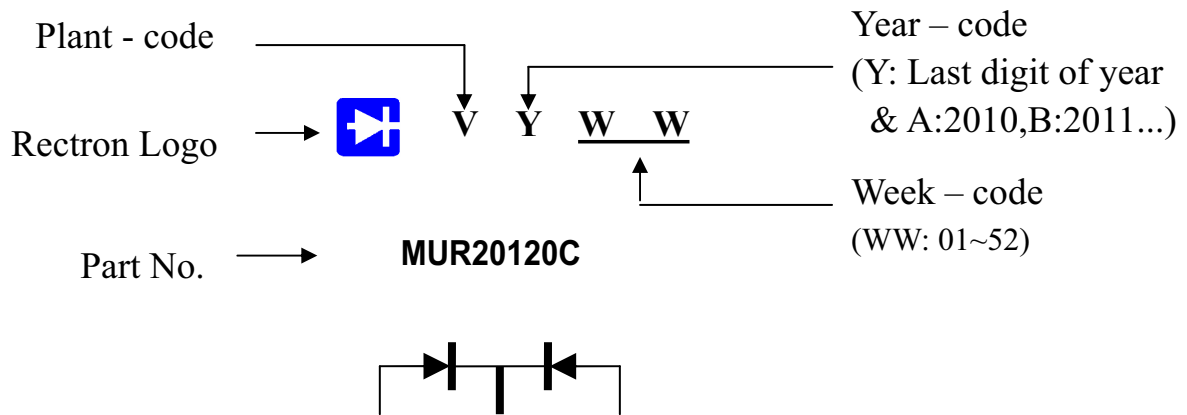


FIG. 4 TYPICAL REVERSE CHARACTERISTICS PER LEG



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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