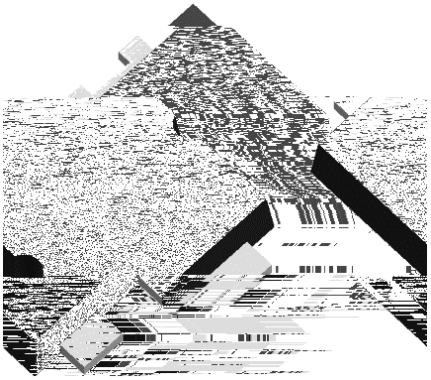
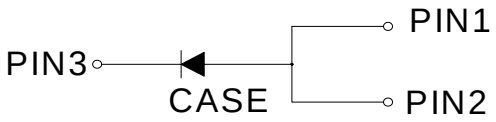
Surface Mount Ultrafast Rectifier Diode



Unless otherwise specified)



Features

- Ultrafast reverse recovery time
- Low leakage current
- Low switching losses, high efficiency
- High forward surge capability
- Solder dip 260 °C max. 10 s, per JESD 22-B106

Typical Applications

For use in high frequency rectification and freewheeling application in switching mode converters and inverters for consumer, computer and telecommunication.

PARAMETER	SYMBOL	UNIT	MUR5AU60
Device marking code			MUR5AU60
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	V	600
Maximum RMS Voltage	V_{RMS}	V	424
Maximum DC blocking Voltage	V_{DC}	V	600
Average Rectified Output Current @60Hz sine wave, Resistance load, Tc (FIG.1)	I_O	A	5.0
Forward Surge Current (Non-repetitive) @60Hz Half-sine wave,1 cycle, Tj=25	I_{FSM}	A	120
Forward Surge Current (Non-repetitive) @1ms, square wave, 1 cycle, Tj=25			240
Current squared time @1ms≤t≤8.3ms Tj=25	I^2t	A^2s	60
Typical Junction capacitance @4V,1MHz	Cj	pF	40
Storage Temperature	T_{stg}		-55 ~ +150
Junction Temperature	Tj		-55 ~ +150

vElectrical Characteristics (Tj=25 Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS		Min	Typ	Max
Instantaneous forward voltage drop per diode	V_{FM}	V	Tj=25 -	I_{FM}=5.0A	-	1.18	1.50
			Tj=125 -		-	0.94	1.25
Reverse Recovery Time	T_{RR}	ns	Tj=25	I_F=0.5A,I_R=1.0A, I_{rr}=0.25A	-	-	50
			Tj=25	I_F=5A di/dt=-200A/us V_{RM}=400V	-	44	-
			Tj=125		-	73	-
Peak recovery current	I_{RRM}	A	Tj=25		-	7.05	-
			Tj=125		-	11.33	-
Reverse recovery charge	Qrr	nC	Tj=25		-	155	-
			Tj=125		-	410	-
DC reverse current at rated DC blocking voltage per diode	I_{RRM1}	uA	Tj=25 -	V_{RM}=V_{RRM}	-	-	5
	I_{RRM2}		Tj=125 -		-	-	50
Non-repetitive avalanche energy	EAS	mJ	Tj=25	I_R=1.4A L=15 mH	120		

vThermal Characteristics (Tj=25 Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	MUR5AU60
Typical Thermal resistance	R_{J-A}(1)	- /W	50
	R_{J-C}(1)		8

v Ordering Information (Example)

PREFERED P/N	PACKAGE CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
MUR5AU60	F1	Approximate 0.0821	5000	/	80000	13” reel

■ **Characteristics** (Typical)

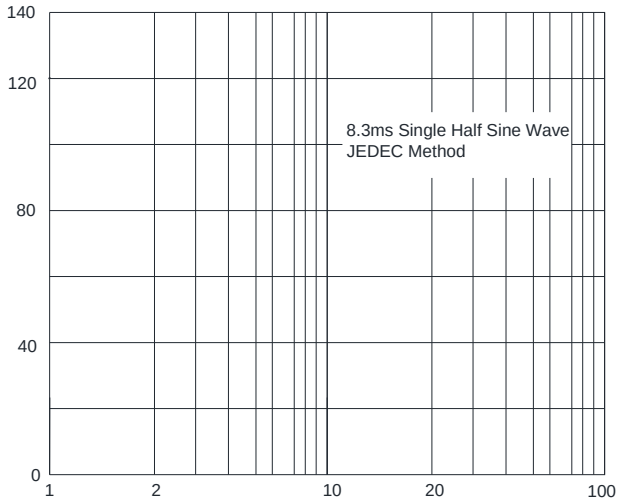
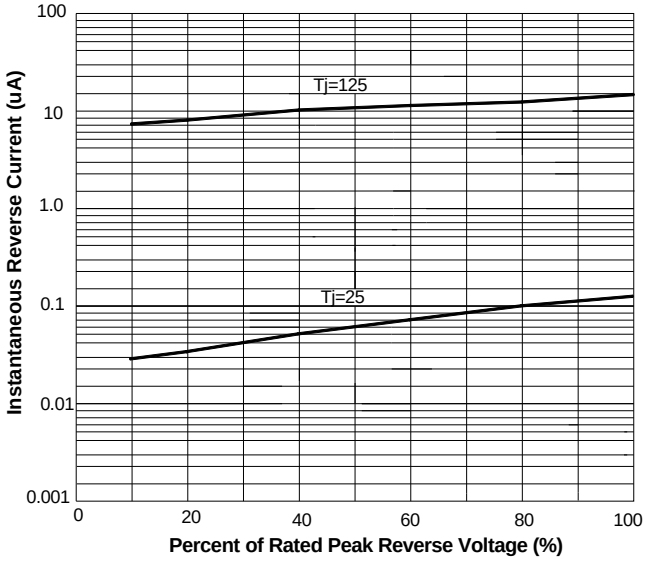


FIG.4: Typical Reverse Characteristics



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