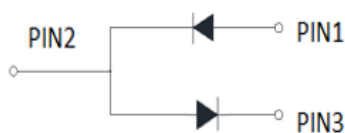
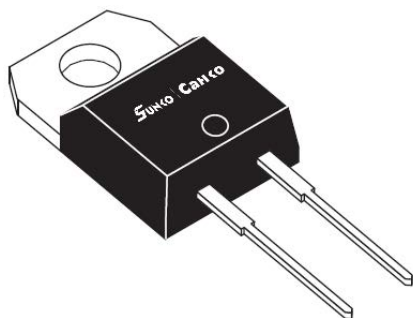


Ultra-Fast Recovery Diodes 8A FRED



Features

- Adopt FRED chip
- Low forward Voltage drop
- Fast reverse recovery time
- High frequency operation
- High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- Guard ring for enhanced ruggedness and long term reliability

Typical Applications

Typical applications are in switching power supplies, converters, freewheeling diodes, and reverse battery protection.

Mechanical Data

- **Package:** TO-220AC
Molding compound meets UL 94 V-0 flammability rating, -
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** As marked

■Maximum Ratings (T_j=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	MURIS860UC
Device marking code			MURIS860UC
Repetitive Peak Reverse Voltage	V _{RRM}	V	600
Average Rectified Output Current @60Hz sine wave, R-load, T _c (FIG.1)	I _O	A	8
Surge(Non-repetitive) Forward Current @60Hz half sine-wave, 1 cycle, T _j =25°C	I _{FSM}	A	100
Current Squared Time @1ms≤t≤8.3ms T _j =25°C,	I ² t	A ² s	41.5
Storage Temperature	T _{stg}	°C	-55 ~ +150
Junction Temperature	T _j	°C	-55 ~ +150
Typical Junction capacitance @4V, 1MHz	C _j	pF	35

MURIS860UC

■Electrical Characteristics

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	Min	Typ	Max
Instantaneous forward voltage drop per diode	V_{FM}	V	$I_{FM}=8.0A$ @ $T_j=25^{\circ}C$	-	2.57	3.60
			$I_{FM}=8.0A$ @ $T_j=125^{\circ}C$	-	2.05	3.00
DC reverse current at rated DC blocking voltage per diode	I_{RRM1}	μA	$V_{RM}=V_{RRM}$ $T_j=25^{\circ}C$	-	-	10
	I_{RRM2}		$V_{RM}=V_{RRM}$ $T_j=125^{\circ}C$	-	-	100
Reverse Recovery Time	T_{rr}	ns	$I_F=0.5A$ $I_{RM}=1A$ $I_{RR}=0.25A$ $T_j=25^{\circ}C$	-	13	25
			$T_j=25^{\circ}C$		31.29	
			$T_j=125^{\circ}C$		45.06	
Peak recovery current	I_{RRM}	A	$T_j=25^{\circ}C$	-	1.65	-
			$T_j=125^{\circ}C$	-	4.18	-
Reverse recovery charge	Q_{rr}	nC	$T_j=25^{\circ}C$	-	25.83	-
			$T_j=125^{\circ}C$	-	94.11	-

■Thermal Characteristics ($T_j=25^{\circ}C$ Unless otherwise specified)

PARAMETER		SYMBOL	UNIT	MURIS860UC
Thermal Resistance	Between junction and case	$R_{\theta J-C}$	$^{\circ}C/W$	2.6

■Characteristics (Typical)

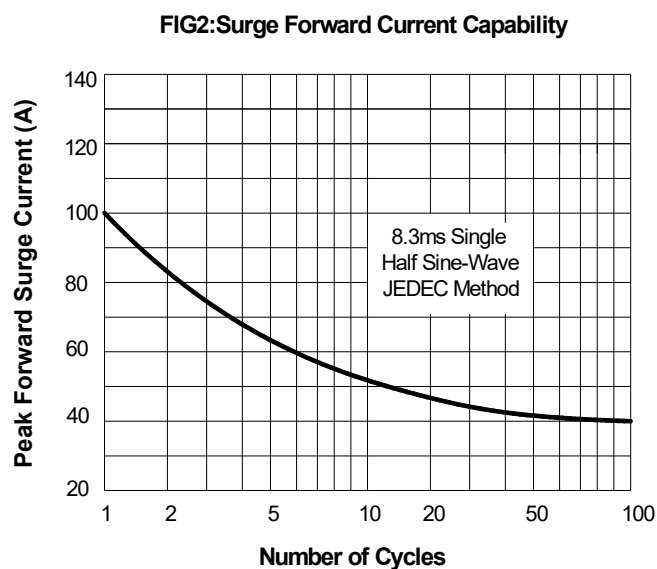
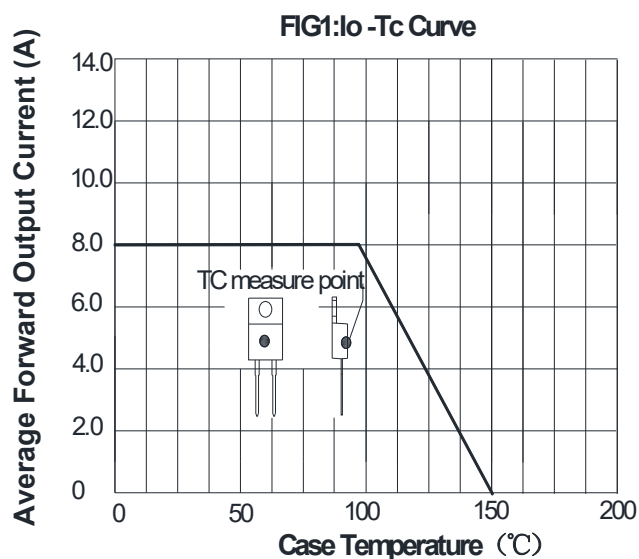


FIG3: Forward Voltage

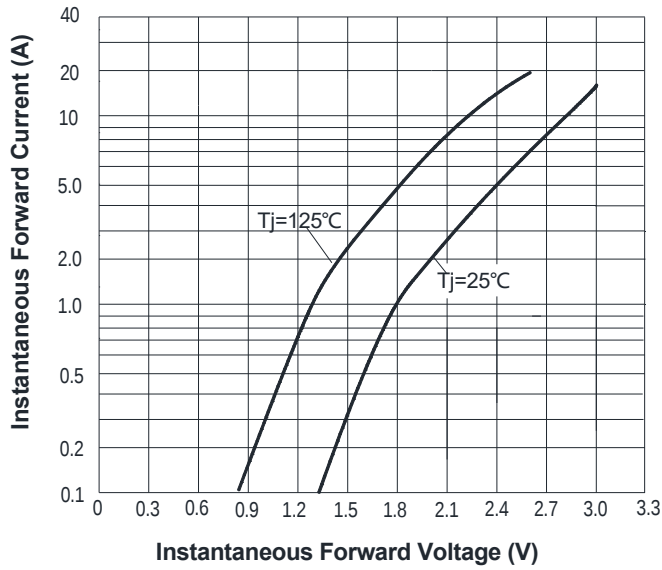
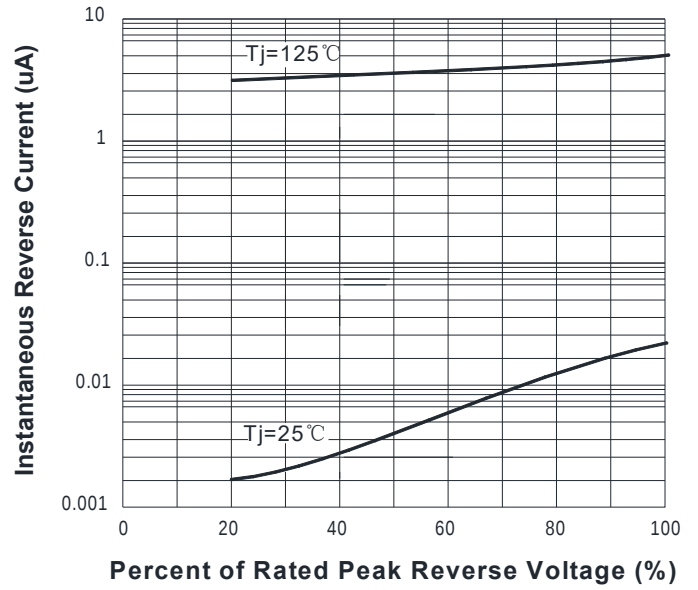
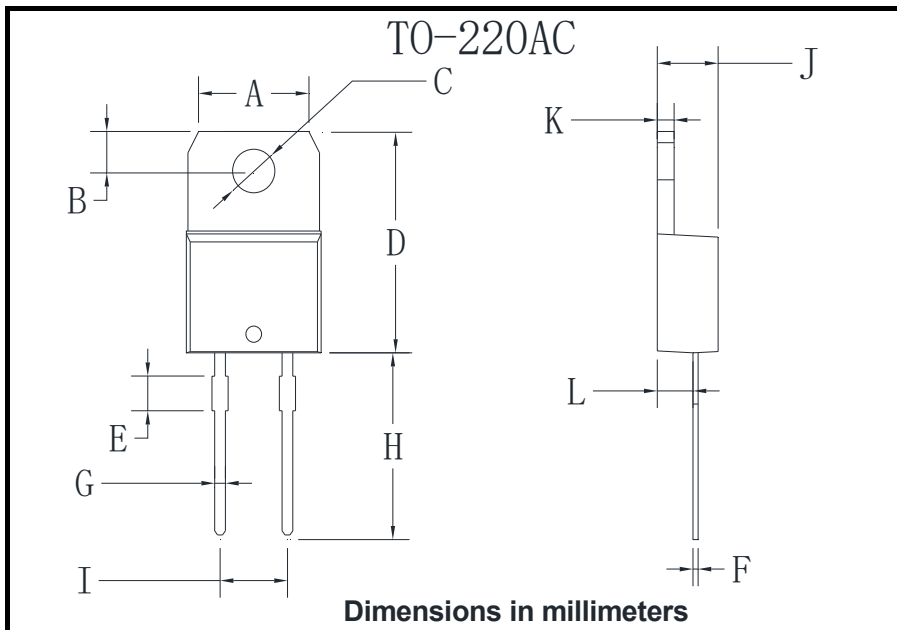


FIG.4: Instantaneous Reverse Characteristics



■Outline Dimensions



TO-220AC		
Dim	Min	Max
A	7.80	8.20
B	2.73	2.87
C	3.75	3.80
D	15.37	15.63
E	2.30	2.38
F	0.45	0.60
G	0.77	0.85
H	13.28	13.42
I	5.08 BSC	
J	4.42	4.52
K	1.26	1.28
L	2.49	2.69

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