MOSPEC

UFEF08A60

Switch mode
Full Plastic Single Ultra-fast Power Rectifiers

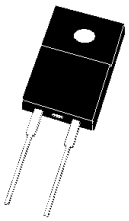
Designed for use in switching power supplies, inverters and as free-wheeling diodes. These state-of-the-art devices have the following

Features

- Low T_{RR}
- High Surge Capacity
- Low Power Loss, High efficiency
- 175℃ Operating Junction Temperature
- Low Forward Voltage , High Frequency
- High-Switching Speed Recovery Time
- Plastic Material used Carries Underwriters Laboratory Flammability Classification 94V-O
- Pb free
- In compliance with EU RoHs directives

ULTRA FAST RECTIFIERS

8 AMPERES
600 VOLTS



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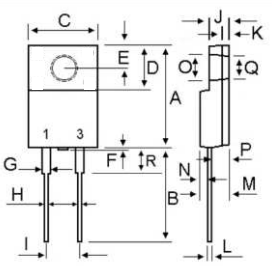
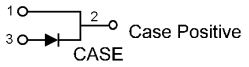
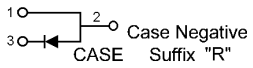


DIM	MILLIMETERS	
	MIN	MAX
A	14.80	16.10
B	12.65	14.40
C	9.70	10.36
D	4.60	6.80
E	2.50	3.50
F	---	2.00
G	0.90	1.45
H	0.50	0.90
I	4.80	5.40
J	2.34	3.30
K	0.55	1.30
L	0.36	0.80
M	4.20	4.90
N	1.10	1.80
O	2.90	3.50
P	2.30	3.15
Q	2.90	3.50
R	2.80	4.85





MAXIMUM RATINGS

Characteristic	Symbol	UFEF08A60	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	600	V
RMS Reverse Voltage	$V_{R(RMS)}$	420	V
Average Rectifier Forward Current	$I_{F(AV)}$	8.0	A
Peak Repetitive Forward Current (Rate V_R, Square Wave, 20kHz)	I_{FM}	8.0	A
Non-Repetitive Peak Surge Current (Surge applied at rate load conditions half-wave, single phase, 60Hz)	I_{FSM}	100	A
Operating and Storage Junction Temperature Range	T_J , T_{stg}	-65 to +175	℃

THERMAL RESISTANCES

Typical Thermal Resistance junction to case	$R_{\theta jc}$	4.2	℃/w

ELECTRICAL CHARACTERISTICS

Characteristic	Symbol	Min.	Typ.	Max.	Unit
Maximum Instantaneous Forward Voltage (I_F =8 Amp T_C = 25℃) (I_F =8 Amp T_C = 125℃)	V_F	 --- ---	 1.85 1.50	 2.2 ---	V
Maximum Instantaneous Reverse Current (Rated DC Voltage, T_C = 25℃) (Rated DC Voltage, T_C = 125℃)	I_R	 --- ---	 0.02 5	 25 ---	uA
Reverse Recovery Time (I_F = 0.5 A, I_R =1.0 , I_{rr} =0.25 A)	T_{rr}	---	22	25	ns

FIG-1 TYPICAL FORWARD CHARACTERISTICS

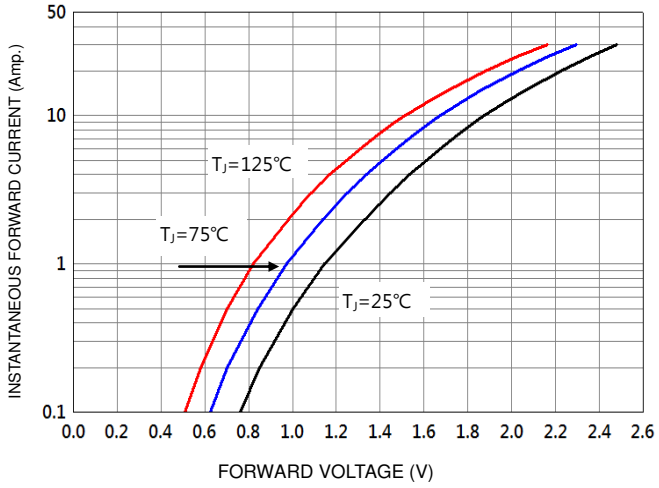


FIG-2 FORWARD CURRENT DERATING CURVE

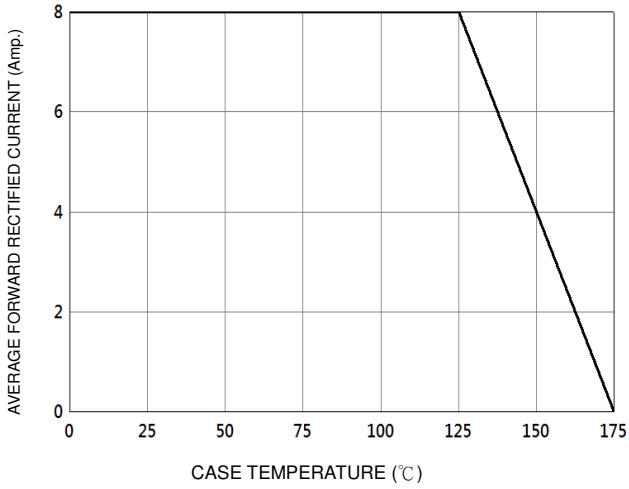


FIG-3 TYPICAL REVERSE CHARACTERISTICS

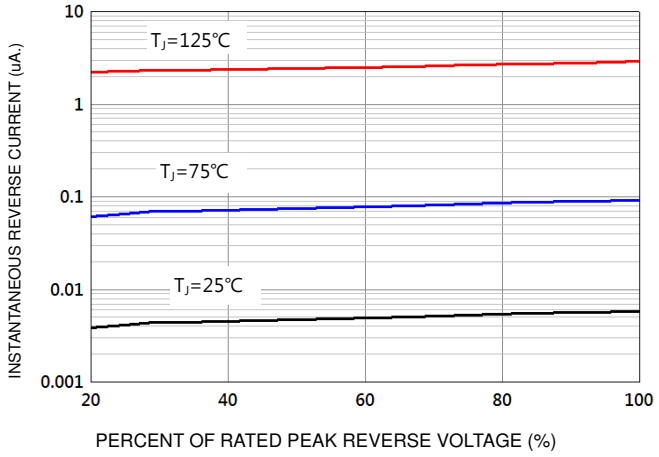
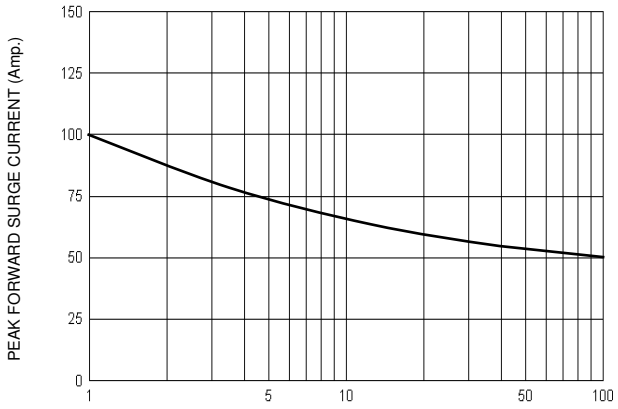
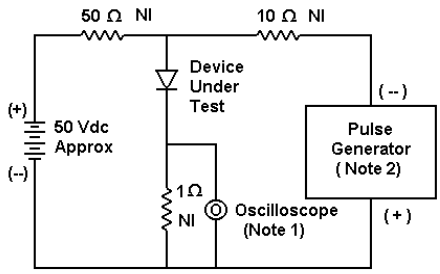
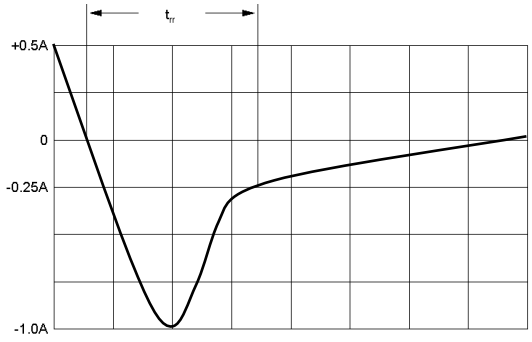


FIG-4 PEAK FORWARD SURGE CURRENT





Notes:
1. Rise Time = 7 ns max. Input Impedance =1 M Ω , 22 pF
2. Rise Time = 10 ns max. Input Impedance = 50 Ω



Set time base for 10/20 ns/cm

FIG-5 Reverse Recovery Time Characteristic and Test Circuit Diagram

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