SUPER-FAST RECOVERY RECTIFIERS

Features	
	◆ Ultrafast 35 Nanosecond Recovery Time ◆ 150° C Operating Junction Temperature ◆ Popular TO-247 Package ◆ High Temperature Glass Passivated Junction ◆ Low Forward Voltage ◆ Low Leakage Current ◆ Reverse Voltage to 600 Volts ◆ Pb-Free Packages are Available

Typical Reference Data

VRRM= 200V
IF(AV)= 30A

VRRM= 400V
IF(AV)= 30A

VRRM= 600V
IF(AV)= 30A

Mechanical Characteristics	
	● Case: Epoxy, Molded ● Finish: All External Surfaces Corrosion Resistant and Terminal Leads are Readily Solderable ● Lead Temperature for Soldering Purposes: 260° C Max. for 10 Seconds ● Shipped 50 units per plastic tube

MAXIMUM RATINGS

Rating	Symbol	SFP3002	SFP3004	SFP3006	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	VRRM VRWM VR	200	400	600	V
Average Rectified Forward Current Total Device, (Rated VR), TC = 150℃	IF(AV)	30			A
Peak Repetitive Forward Current (Rated VR, Square Wave, 20 kHz), TC = 150℃	IFM	15			A
Nonrepetitive Peak Surge Current (Surge applied at rated load conditions halfwave , single phase, 60 Hz)	IFSM	300			A
Operating Junction Temperature and Storage Temperature	TJ, Tstg	-40 to +150			℃

THERMAL CHARACTERISTICS (Per Diode Leg)

Maximum Thermal Resistance, Junction to Case	RθJC	1.1	℃/W

ELECTRICAL CHARACTERISTICS(Per Diode Leg)

Maximum Instantaneous Forward Voltage (1) (IF = 15.0 Amps, TC = 25° C)	VF	1.1	1.4	1.7	V
Maximum Instantaneous Reverse Current (1)	IR				μA
(Rated dc Voltage, TJ = 150° C)		500	500	500	
(Rated dc Voltage, TJ = 25° C)		10	10	10	
Maximum Reverse Recovery Time (IF = 0.5 A, IR = 1.0 A, IREC = 0.25 A)	Trr	35			ns

(1) Pulse Test: Pulse Width = 300μs, Duty Cycle≤2.0%.

SUPER-FAST RECOVERY RECTIFIERS

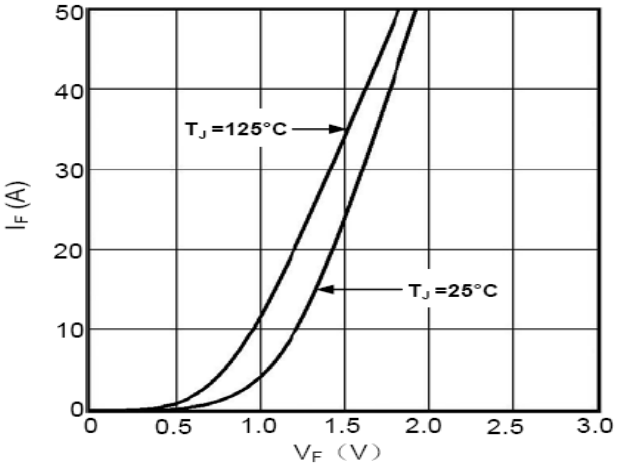


Fig1. Forward Voltage Drop vs Forward Current

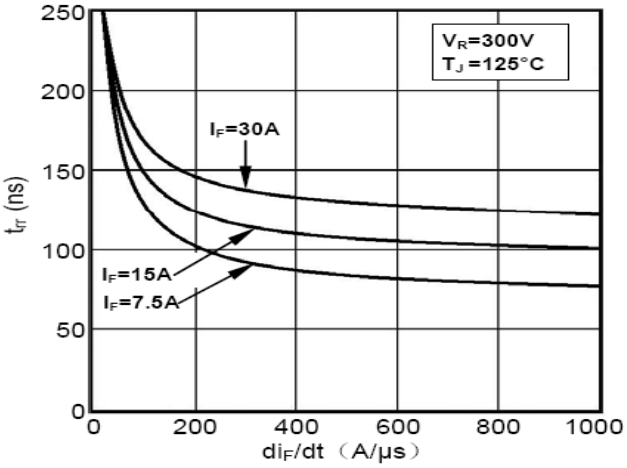


Fig2. Reverse Recovery Time vs di_F/dt

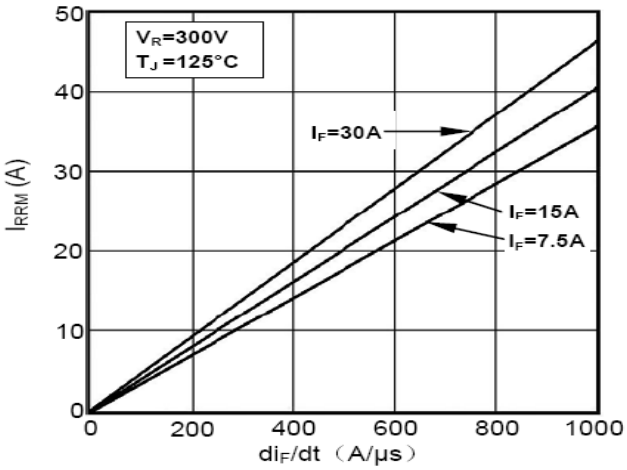


Fig3. Reverse Recovery Current vs di_F/dt

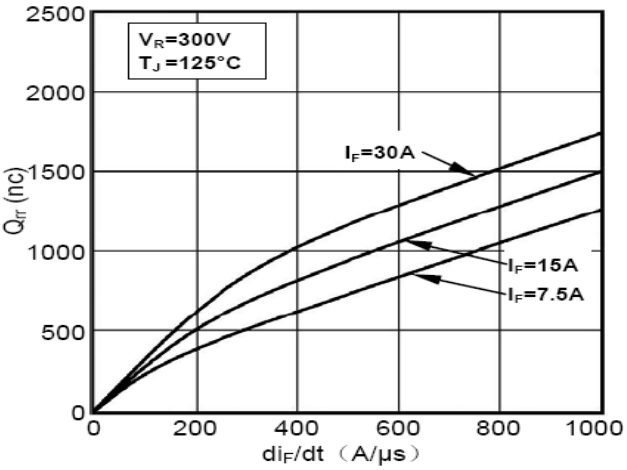


Fig4. Reverse Recovery Charge vs di_F/dt

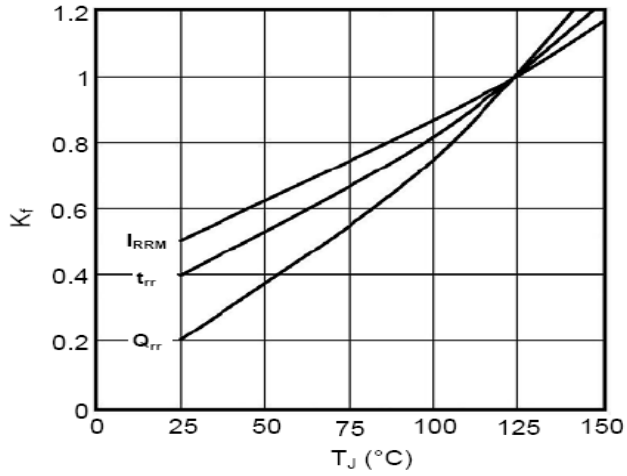


Fig5. Dynamic Parameters vs Junction Temperature

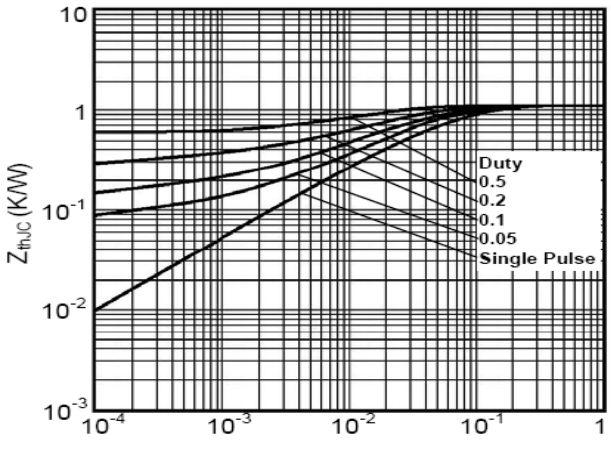
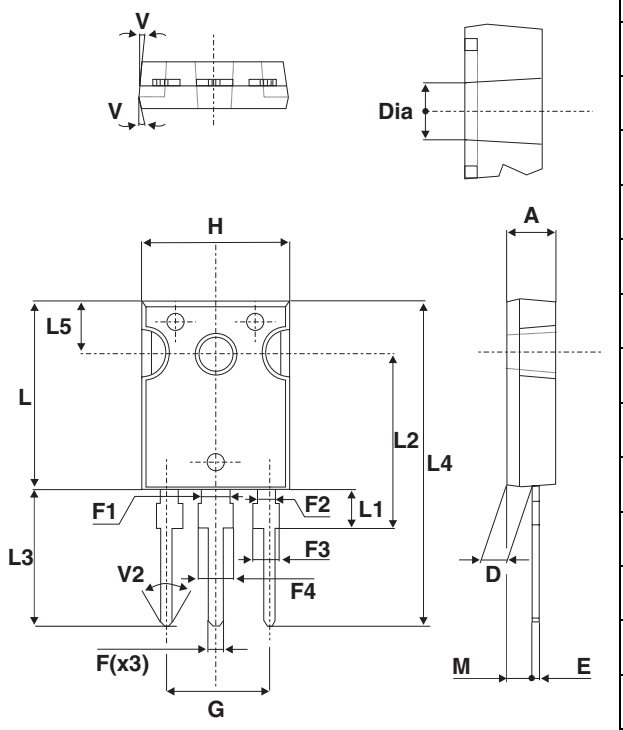


Fig6. Transient Thermal Impedance

SUPER-FAST RECOVERY RECTIFIERS

TO-247/3PAB



Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	4.85		5.16	0.191		0.203
D	2.20		2.60	0.086		0.102
E	0.40		0.80	0.015		0.031
F	1.00		1.40	0.039		0.055
F1		3.00			0.118	
F2		2.00			0.079	
F3	1.90		2.40	0.075		0.094
F4	3.00		3.40	0.118		0.134
G		10.90			0.429	
H	15.45		16.03	0.608		0.631
L	19.85		21.09	0.781		0.830
L1	3.70		4.30	0.146		0.169
L2	18.30		19.13	0.720		0.753
L3	14.20		20.30	0.559		0.799
L4	34.05		41.38	1.341		1.629
L5	5.35		6.30	0.211		0.248
M	2.00		3.00	0.079		0.118
V		5°			5°	
V2		60°			60°	
Dia.	3.55		3.65	0.140		0.144

注意事项：

1. XXXX代表日期码，第一码表示公元年的最后一码，第二码表示生产时当月码（A,B,C…为一月，二月，三月…),第三，四码表示大量生产时批次码。
   例如:2009年第一月生产的，D/C为9AXX。
2. 包装及出货:ROHS,30PCS/管,0.36K/BOX,1.8K(1.8K BOXEX)/CARTON, BOXEX及CARTON。

SFP3006

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修订内容