



JPFR0812CL EPI PLANAR FAST SOFT RECOVERY RECTIFIER

Rev.1.5

DESCRIPTION

Plastic package has underwriters laboratory flammability classification 94V-0
 Lead free in comply with EU RoHS 2011/65/EU directives
 Low reverse leakage current
 Fast recovery time
 Epitaxial planar technology
 5th Generation soft fast recovery characteristics
 Low recovery loss

MECHANICAL DATA

Case: TO-220C-2L molded plastic over passivated junction
 Terminals: Solder plated, solderable per J-STD-002
 Weight:2 gram

ABSOLUTE MAXIMUM RATING (Rating at 25 ambient temperature unless otherwise specified.)

Parameter	Symbol	JPFR0812CL	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	1200	V
Maximum DC blocking voltage	V_{DC}	1200	V
Average forward current at $T_C=150$	$I_{F(AV)}$	8	A
Peak forward surge current: 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	88	A
Peak forward surge current: 10ms single half sine-wave superimposed on rated load		80	
Junction temperature and storage temperature range	T_j, T_{stg}	-55 to +175	



ELECTRICAL CHARACTERISTICS(Rating at 25 ambient temperature unless otherwise specified.)

Parameter		Symbol	Min.	Typ.	Max.	Unit
Forward voltage	$I_F=8A, T_j=25$	V_F	-	1.7	2.2	V
	$I_F=8A, T_j=150$		-	1.5	2	
Reverse current	$V_R=1200V, T_j=25$	I_R	-	-	5	μA
	$V_R=1200V, T_j=150$		-	-	200	
Reverse recovery time	$I_F=1A, V_R=30V,$ $di/dt=100A/\mu s, T_j=25$	t_{rr}	-	-	50	ns
	$I_F=8A, V_R=400V,$ $di/dt=500A/\mu s, T_j=25$		-	40	-	
	$I_F=8A, V_R=400V,$ $di/dt=500A/\mu s, T_j=125$		-	80	-	
	$I_F=8A, V_R=400V,$ $di/dt=500A/\mu s, T_j=150$		-	90	-	
Peak reverse recovery current	$I_F=8A, V_R=400V,$ $di/dt=500A/\mu s, T_j=25$	I_{RM}	-	9	-	A
	$I_F=8A, V_R=400V,$ $di/dt=500A/\mu s, T_j=125$		-	14.5	-	
	$I_F=8A, V_R=400V,$ $di/dt=500A/\mu s, T_j=150$		-	16	-	
Recovered charge	$I_F=8A, V_R=400V,$ $di/dt=500A/\mu s, T_j=25$	Q_r	-	200	-	nC
	$I_F=8A, V_R=400V,$ $di/dt=500A/\mu s, T_j=125$		-	700	-	
	$I_F=8A, V_R=400V,$ $di/dt=500A/\mu s, T_j=150$		-	850	-	

THERMAL RESISTANCES

Symbol	Parameter	Min.	Typ.	Max.	Unit
$R_{th(j-c)}$	Thermal resistance from junction to case	-	-	2	/W

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FIG.5 Forward current derating curve

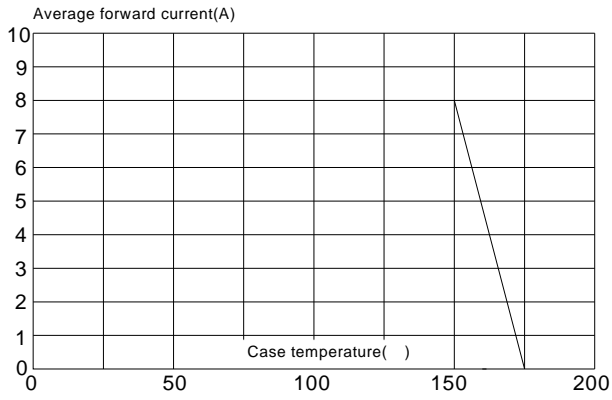
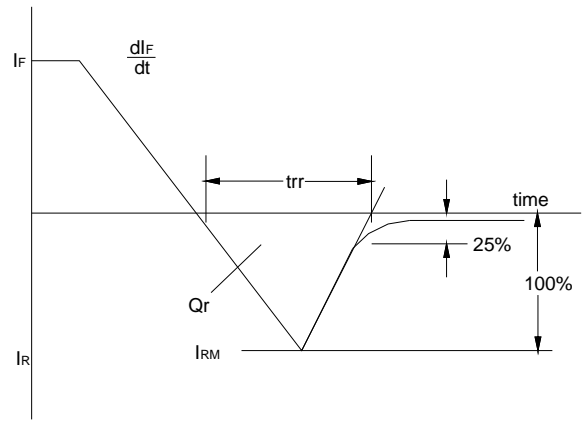


FIG.6 Reverse recovery definitions



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