



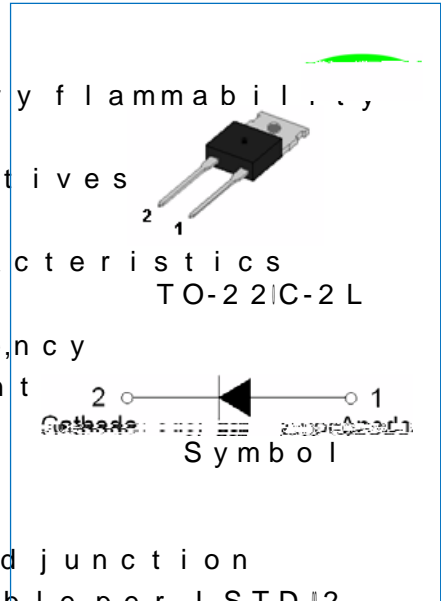
## JECR16CL

### EPI HYPERFAST SOFT RECOVERY RECTIFIER

Rev.1.5

#### DESCRIPTION

Plastic package waisters laboratory flammability classification 94V-0  
 Lead free in compliance with RoHS 2011/65/EU directives  
 Low reverse leakage current  
 Hyperfast recovery time and characteristics  
 Low recovery loss  
 Application: PSFC in ac to dc high frequency switched-mode power supply current power factor correction (PFC)



#### MECHANICAL DATA

Case : TO-220C-2L mounted on passivated junction  
 Terminals : Solder plated, solderable per J-STD-020  
 Weight : 2 gram

#### ABSOLUTE MAXIMUM RATINGS (at 25°C ambient temperature unless otherwise specified)

Parameter	Symb	JECR16CL	Unit
Maximum repetitive peak reverse voltage	$V_{RM}$	60	V
Maximum DC blocking voltage	DC	60	V
Average forward current at $T_c = 25^\circ\text{C}$	$I_{AV}$	1.3	A
$I_{AV} = 1.3$ A, 1ms single half sine-wave superimposed on rated load			
Operating junction temperature range	$T_j$	-55 to +150	°C

ELECTRICAL CHARACTERISTICS

Parameter					Unit	
Forward voltage	$I_F = 1A, T_J = 25$	$V_F$	-	2.5	3.2	V
	$I_F = 1A, T_J = 150$		-	1.3	2	
Reverse current	$V_R = 6V, T_J = 25$	k	-	-	5	$\mu A$
	$V_R = 6V, T_J = 150$		-	-	30	
Reverse recovery time	$I_F = 1A, V_R = 3V,$ $dI/dt = 2A/\mu s, T_J = 25$	$t_r$	-	1.2	1.8	ns
	$I_F = 1A, V_R = 4V,$ $dI/dt = 5A/\mu s, T_J = 25$		-	1.9	-	
	$I_F = 1A, V_R = 2V,$ $dI/dt = 2A/\mu s, T_J = 25$		-	2.6	-	
	$I_F = 1A, V_R = 2V,$ $dI/dt = 2A/\mu s, T_J = 150$		-	3.4	-	
Peak reverse recovery current	$I_F = 1A, V_R = 2V,$ $dI/dt = 2A/\mu s, T_J = 25$	$I_{RM}$	-	2	-	A
	$I_F = 1A, V_R = 2V,$ $dI/dt = 2A/\mu s, T_J = 150$		-	4.8	-	
Recovered charge	$I_F = 1A, V_R = 2V,$ $dI/dt = 2A/\mu s, T_J = 25$	$Q_r$	-	2.6	- a	



CHARACTERISTICS CURVE

FIG.1: Typical forward

FIG.2: Typical reverse

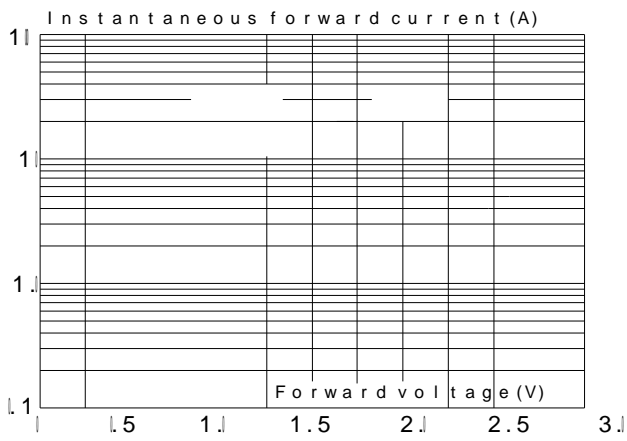


FIG.5: Forward current

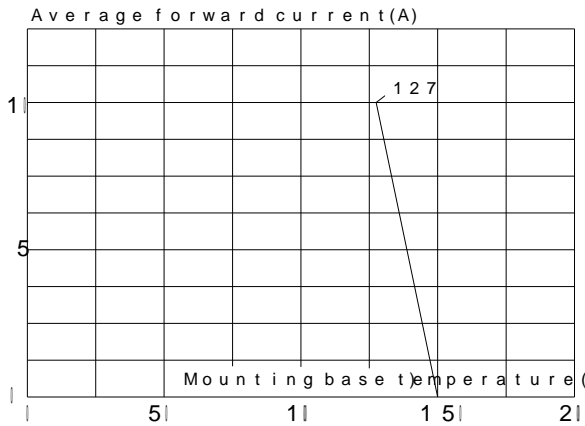


FIG.6: Reverse recover

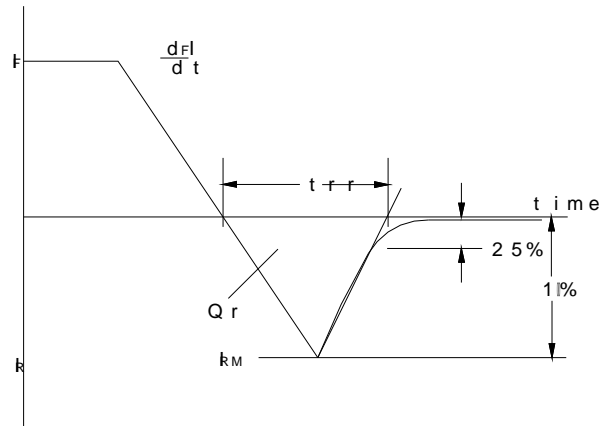


FIG.7: Forward power dissipation vs forward current (square wave)

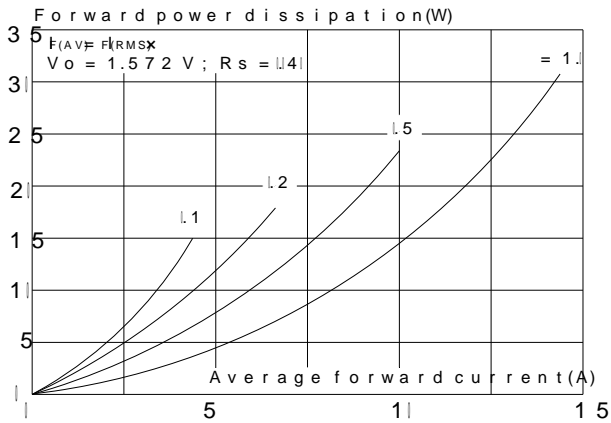


FIG.8: Forward power dissipation vs forward current (sinusoidal)

