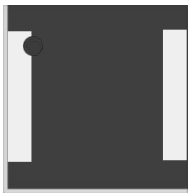


Thyristors Surge Protection Device

Feature

- For surface mounted applications to optimize board space.
- Low profile package.
- Bidirectional crowbar protection.
- Low leakage current.
- Low on-state voltage.
- Low capacitance.
- Solid-state silicon technology.
- Eliminates overvoltage caused by fast rising transients.

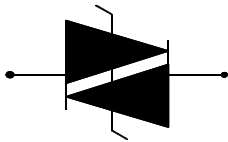


DFN3333-2L (Bottom View)

Mechanical Data

- Case: DFN3333-2L molded plastic.
- Epoxy: UL 94V-0 rate flame retardant.
- Terminals: solderable per MIL-STD-750, method 2026.
- Mounting position: Any.
- RoHS Compliant.

Schematic Diagram



Circuit Diagram

- Terminal Connections: See Diagram Right

Absolute Maximum Ratings (T_A=25°C unless otherwise specified)

Parameter		Symbol	Value	Unit
Minimum Non-repetitive peak impulse current	10×1000μs	I _{PP}	100	A
	5×320μs		150	
	8×20μs		300	
Non-repetitive peak pulse voltage	10/700μs	V _{PP}	6000	V
Operating junction temperature range		T _J	-40 to +125	°C
Storage temperature range		T _{STG}	-60 to +150	°C



Electrical Characteristics (T_A=25°C unless otherwise specified)

Symbol	Parameter	
V _{DRM}	Peak off-state voltage	
I _{DRM}	Off-state current	
V _S	Switching voltage	
I _S	Switching current	
V _T	On-state voltage	
I _T	On-state current	
I _H	Holding current	
C _O	Off-state capacitance	

Electrical Characteristics (T_A=25°C unless otherwise specified)

Part Number	V _{DRM} @I _{DRM}		V _S @I _S		V _T @I _T		C _O	I _H
		Max.	Max.	Max.	Max.	Max.	Typ.	Min.
	V	μA	V	mA	V	A	pF	mA
P4500Q22CLRP	400	5.0	530	800	5.0	2.2	45	50

- Note:
- 1.Switching voltage (V_S) is measured at 100KV/s.
 - 2.Off-state capacitance (C_O) is measured at 1MHz with a 2V bias.



Typical Performance Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise specified)

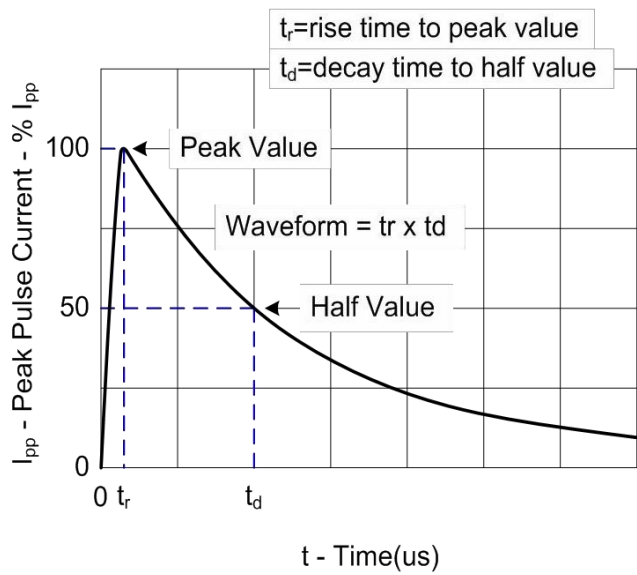


Fig.1 $t_r \times t_d$ Pulse Waveform

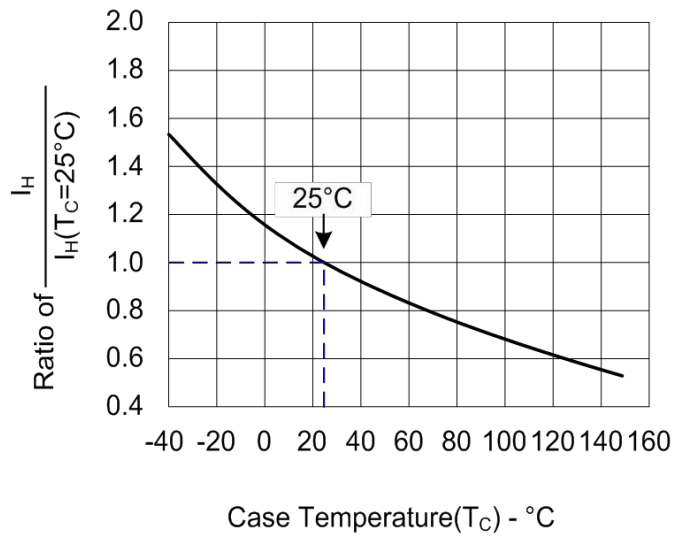


Fig.2 Normalized DC Holding Current
versus Case Temperature

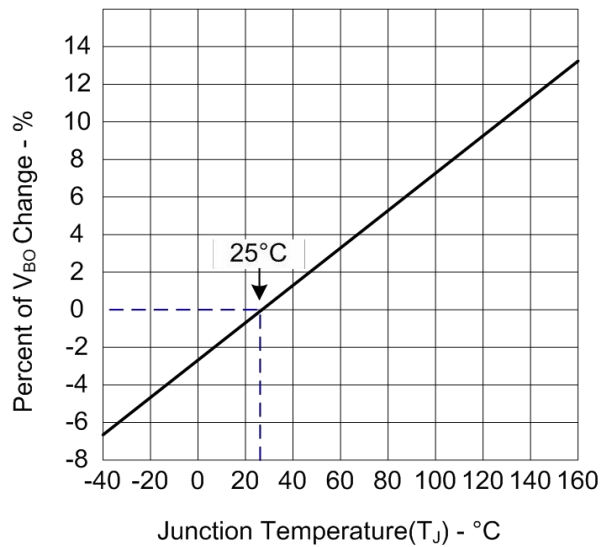
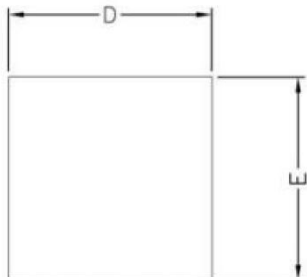
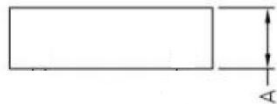
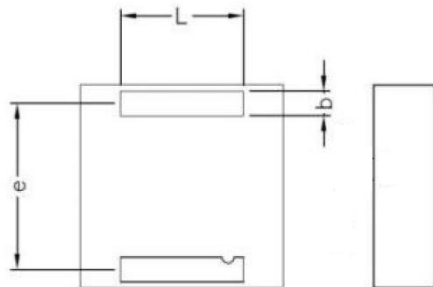


Fig.3 Normalized VBO Change versus
Junction Temperature

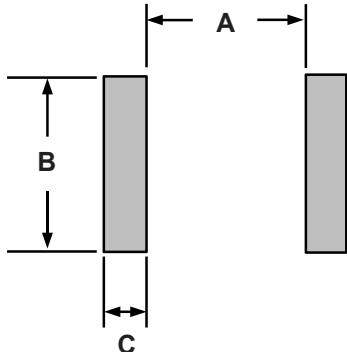


DFN3333-2L Package Outline Drawing

SYM	DIMENSIONS					
	Millimeters			Inches		
	Min	Nom	Max	Min	Nom	Max
A	0.500	--	1.050	0.020	--	0.041
D	3.250	3.300	3.350	0.128	0.130	0.132
E	3.250	3.300	3.350	0.128	0.130	0.132
e	2.700 BSC			0.106 BSC		
b	0.350	0.400	0.450	0.014	0.016	0.018
L	1.950	2.000	2.050	0.077	0.079	0.081



Suggested PAD Layout

SIZE	DFN3333-2L		
	Millimeters	Inches	
A	2.10	0.083	
B	2.5	0.098	
C	1.00	0.040	

Ordering Information

Part Number	Package	Weight	Base qty	Reel Size	Delivery mode
		grams(approx.)	(pcs)	(inch)	
P4500Q22CLRP	DFN3333-2L	0.034	5000	13	Tape and reel