



Peak pulse voltage ( $T_j=25$ ; non-repetitive, off-state; FIG.7)	$V_{pp}$	4.5	kV
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**ELECTRICAL CHARACTERISTICS** ( $T_j=25$  unless otherwise specified)

Symbol	Test Condition	Quadrant	Value	Unit	
$I_{GT}$	$V_D=12V R_L=33$	- -	MAX.	5	mA
				10	
$V_{GT}$		ALL	MAX.	1	V
$V_{GD}$	$V_D=V_{DRM} T_j=125$ $R_L=3.3k$	ALL	MIN.	0.2	V
$I_L$	$I_G=1.2I_{GT}$	- -	MAX.	15	mA
				20	
$I_H$	$I_T=500mA$		MAX.	10	mA
$dV/dt$	$V_D=540V$ Gate Open $T_j=125$		MIN.	40	V/ $\mu s$
$(dV/dt)_c$	$(dI/dt)_c=7.2A/ms, T_j=110$		MIN.	2	V/ $\mu s$
$t_{on}$	$I_G=20mA I_A=200mA I_R=20mA$ $T_j=25$		TYP.	3	$\mu s$
$t_{off}$				50	

**STATIC CHARACTERISTICS**

Symbol	Parameter	Value(MAX.)	Unit	
$V_{TM}$	$I_{TM}=20A t_p=380\mu s$ $T_j=25$	1.5	V	
$V_{TO}$	Threshold voltage $T_j=125$	0.75	V	
$R_D$	Dynamic resistance $T_j=125$	27	m	
$I_{DRM}$	$V_D=V_{DRM} V_R=V_{RRM}$	$T_j=25$	5	$\mu A$
$I_{RRM}$		$T_j=125$	0.5	mA

**THERMAL RESISTANCES**

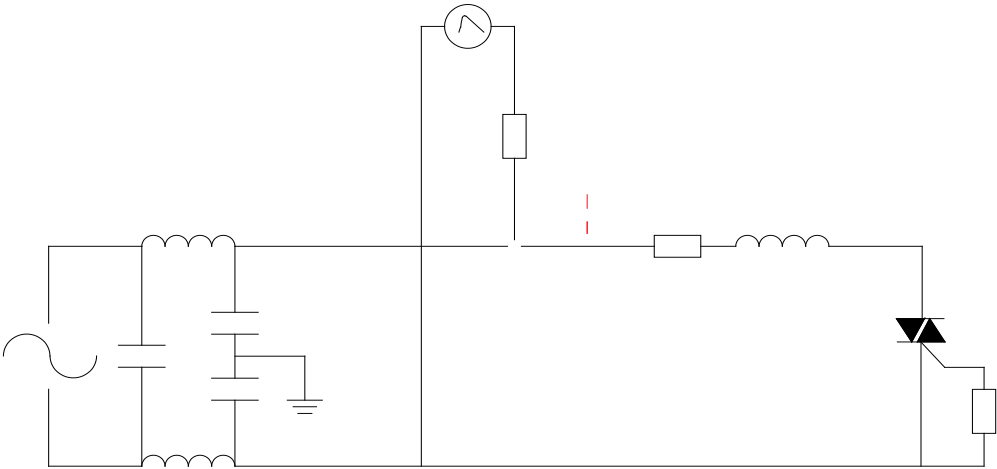
Symbol	Parameter	Value	Unit
$R_{th(j-c)}$	junction to case (AC)	2.3	$\text{}/W$
$R_{th(j-a)}$	junction to ambient (AC)	60	$\text{}/W$



**JST139A-800D**

**JieJie M**

FIG.7 Test circuit for inductive and resistive loads to IEC-61000-4-5 standards



**ORDERING INFORMATION**

Order code	Voltage $V_{DRM}/V_{RRM}$ (V)	IGT(mA)		Package	Base qty. (pcs)	Delivery mode
		-	-			
JST139A-800D	800	5	10	TO-220A(Ins)	50	Tube

**Document Revision History**

Date	Revision	Changes
Apr.14, 2023	A.1.0	Last updated
Oct.14, 2025	A.1.1	Revise PACKAGE MECHANICAL DATA



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