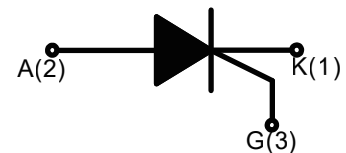
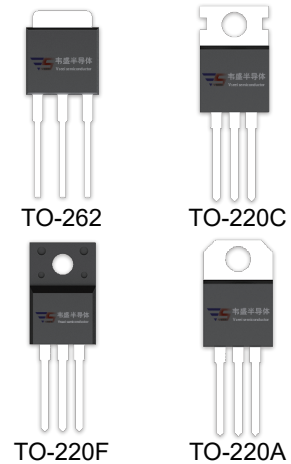


DESCRIPTION:

With high ability to withstand the shock loading of large current, BT152-800R series of silicon controlled rectifiers provide high dv/dt rate with strong resistance to electromagnetic interference. They are especially recommended for use on solid state relay, motorcycle, power charger, T-tools etc.



MAIN FEATURES

Symbol	JCT620	JCT820
V_{DRM}/V_{RRM}	600V	800V
$I_{T(RMS)}$	20A	
I_{GT}	$\leq 25mA$	

ABSOLUTE MAXIMUM RATINGS

Parameter		Symbol	Value	Unit
Storage junction temperature range		T_{stg}	-40-150	$^{\circ}C$
Operating junction temperature range		T_j	-40-150	$^{\circ}C$
Repetitive peak off-state voltage($T_j=25^{\circ}C$)		V_{DRM}	600/800	V
Repetitive peak reverse voltage($T_j=25^{\circ}C$)		V_{RRM}	600/800	V
RMS on-state current	TO-220A(Ins)/ TO-220F(Ins)($T_c=95^{\circ}C$)	$I_{T(RMS)}$	20	A
	TO-220A(Non-Ins)/ TO-220C ($T_c=110^{\circ}C$)			
	TO-262 ($T_c=80^{\circ}C$)			
Non repetitive surge peak on-state current ($t_p=10ms$)		I_{TSM}	250	A

I ² t value for fusing (tp=10ms)	I ² t	312.5	A ² s
Critical rate of rise of on-state current (I _G =2×I _{GT})	dI/dt	50	A/μs
Peak gate current	I _{GM}	4	A
Average gate power dissipation	P _{G(AV)}	1	W
Peak gate power	P _{GM}	5	W

ELECTRICAL CHARACTERISTICS (T_j=25°C unless otherwise specified)

Symbol	Test Condition	Value			Unit
		MIN.	TYP.	MAX.	
I _{GT}	V _D =12V R _L =33Ω	-	-	25	mA
V _{GT}		-	-	1.3	V
V _{GD}	V _D =V _{DRM} T _j =150°C R _L =3.3KΩ	0.2	-	-	V
I _L	I _G =1.2I _{GT}	-	-	70	mA
I _H	I _T =500mA	-	-	60	mA
dV/dt	V _D =2/3V _{DRM} Gate Open T _j =150°C	200	-	-	V/μs

STATIC CHARACTERISTICS

Symbol	Parameter		Value(MAX)	Unit
V _{TM}	I _{TM} =40A tp=380μs	T _j =25°C	1.55	V
I _{DRM}	V _D =V _{DRM} V _R =V _{RDM}	T _j =25°C	5	μA
I _{RDM}		T _j =150°C	4	mA

THERMAL RESISTANCES

Symbol	Parameter		Value	Unit
R _{th(j-c)}	junction to case(AC)	TO-220A(Ins)	2.1	°C/W
		TO-220A(Non-Ins)/TO-220C	1.1	
		TO-220F(Ins)	2.2	
		TO-262	2.5	

FIG.1: Maximum power dissipation versus RMS on-state current

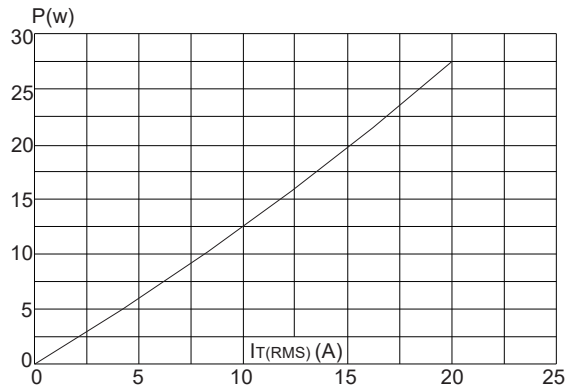


FIG.2: RMS on-state current versus case temperature

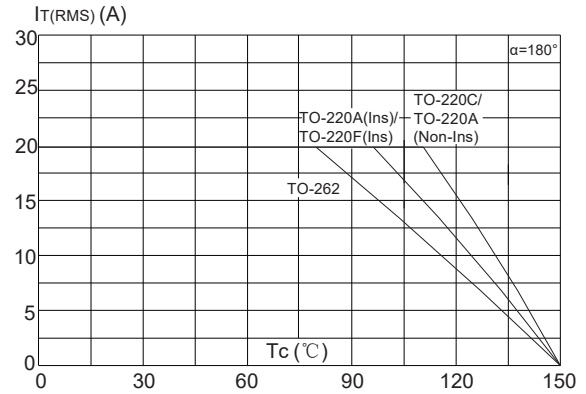


FIG.3: Surge peak on-state current versus number of cycles

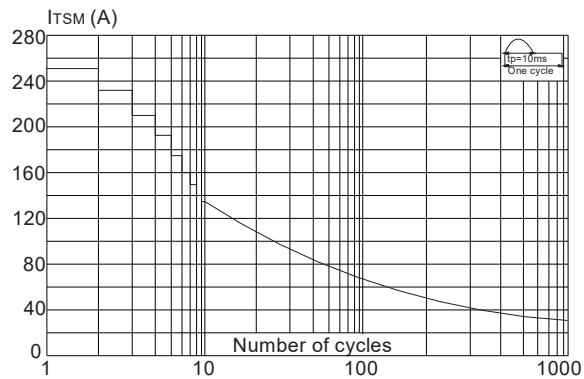


FIG.4: On-state characteristics (maximum values)

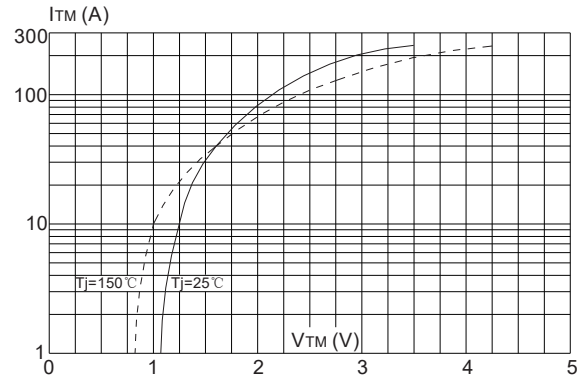


FIG.5: Non-repetitive surge peak on-state current for a sinusoidal pulse with width $t_p < 10\text{ms}$, and corresponding value of I^2t

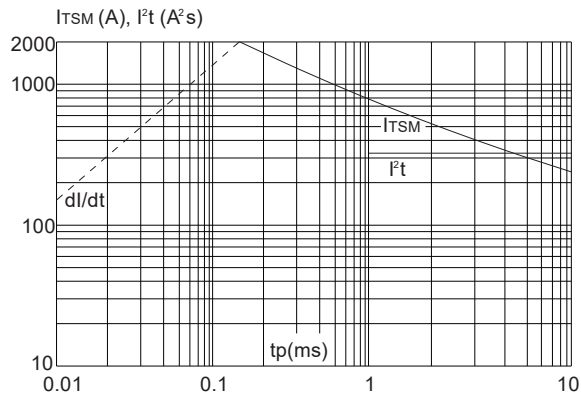


FIG.6: Relative variations of gate trigger current, holding current and latching current versus junction temperature

