

3-1 Thyristors

Thyristors

Part Number	Absolute Maximum Ratings												I _{RRM} I _{IDRM} (mA) max	Conditions T _j (°C)
	V _{RSM} V _{DSM} (V)	V _{RRM} V _{DRM} (V)	I _T (AV) (A)	Conditions T _c (°C)	I _T (RMS) (50Hz) (A)	I _{TSM} 50Hz Single Half Sine Wave, Default T _j =125°C (A)	P _{GM} (W)	P _G (AV) (W)	V _{RGM} (V)	I _{FGM} (A)	T _j (°C)	T _{stg} (°C)		
TF541S-A	500	400	5.0	88	7.8	80	5.0	0.5	5.0	2.0	-40 to +125	2.0	125	
SLA0201	650	600	5 × 4		7.8	80	5.0	0.5	5.0	2.0	-40 to +125	2.0	125	
TF561S-A	700	600	5.0	88	7.8	80	5.0	0.5	5.0	2.0	-40 to +125	2.0	125	
TFA37S	-	700	3.0	127	4.7	60	5.0	0.5	5.0	2.0	-40 to +150	2.0	150	
TFA57S	-	700	5.0	115	7.8	80	5.0	0.5	5.0	2.0	-40 to +150	2.0	150	
TFA87S	-	700	8.0	98	12.6	120	5.0	0.5	5.0	2.0	-40 to +150	2.0	150	
TFA107S	-	700	10	86	15.7	160	5.0	0.5	5.0	2.0	-40 to +150	2.0	150	
TFA38S	-	800	3.0	50	4.7	60	5.0	0.5	5.0	2.0	-40 to +150	2.0	150	
TFA58S	-	800	5.0	50	7.8	80	5.0	0.5	5.0	2.0	-40 to +150	2.0	150	
TFA88S	-	800	8.0	50	12.6	120	5.0	0.5	5.0	2.0	-40 to +150	2.0	150	
TFA108S	-	800	10	50	15.7	160	5.0	0.5	5.0	2.0	-40 to +150	2.0	150	

3-Pin Reverse Conducting Thyristors for HID Lamp Ignition

Part Number	Absolute Maximum Ratings										I _{IDRM} (mA) max	Conditions T _j (°C)	V _{TM} (V) max	Conditions	
	V _{DRM} (V)	I _{TRM} ^{*1} (A)	di/dt ^{*1} (A/μs)	P _{GM} (W)	P _G (AV) (W)	V _{RGM} (V)	I _{FGM} ^{*2} (A)	I _{FRM} (A)	T _j (°C)	T _{stg} (°C)				T _c (°C)	I _{TM} (A)
TFC563D	600	500	1500	5.0	0.5	5.0	2.0	450	-40 to +125	1.0	125	1.4	25	10	

*1: T_c≤100°C, V_D≤430V, W_p≤1.0μs, I_G≥70mA, dig/dt≥0.5A/μs, 100kcycles

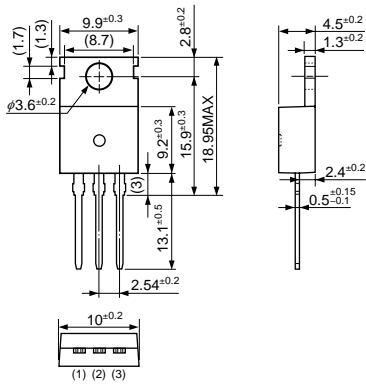
*2: T_c≤100°C, V_D≤430V, W_p≤1.0μs, 100kcycles

Electrical Characteristics																	Package	Mass g
V _{TM} (V) max	Conditions T _c (°C) I _{TM} (A)		V _{GT} (V)		I _{GT} (mA)		Conditions T _c (°C)	V _{GD} (V) min	T _j (°C)	Conditions V _D (V)	dv/dt (V/μs) typ	Conditions T _j (°C)	V _D (V)	I _H (mA) typ	R _{th} (°C/W) max	TO220F		
	typ	max	typ	max	typ	max	typ	max	typ	max	typ	max	typ	max	typ		max	
1.4	25	10		1.5	0.03	0.2	25	0.1	125	1/2V _{DRM}	20	125	1/2V _{DRM}	4.0	4.0	TO220F	2.0	
1.4	25	10	0.7	1.5	5.0	10	25	0.1	125	1/2V _{DRM}	50	125	1/2V _{DRM}	4.0		SIP12 with Fin (SLA12Pin)	6.0	
1.4	25	10		1.5	0.03	0.2	25	0.1	125	1/2V _{DRM}	20	125	1/2V _{DRM}	4.0	4.0	TO220F	2.0	
1.5	25	10	—	1.0	7.0	15	25	0.2	125	1/2V _{DRM}	300	125	1/2V _{DRM}	15	4.1	TO220F	2.0	
1.5	25	15	—	1.0	7.0	15	25	0.2	125	1/2V _{DRM}	300	125	1/2V _{DRM}	15	3.8	TO220F	2.0	
1.4	25	20	—	1.0	7.0	15	25	0.2	125	1/2V _{DRM}	300	125	1/2V _{DRM}	20	3.5	TO220F	2.0	
1.35	25	20	—	1.0	7.0	15	25	0.2	125	1/2V _{DRM}	300	125	1/2V _{DRM}	20	3.4	TO220F	2.0	
1.5	25	10	—	1.0	—	15	25	0.2	125	1/2V _{DRM}	300	125	1/2V _{DRM}	15	4.1	TO220F	2.0	
1.5	25	15	—	1.0	—	15	25	0.2	125	1/2V _{DRM}	300	125	1/2V _{DRM}	15	3.8	TO220F	2.0	
1.5	25	20	—	1.0	—	15	25	0.2	125	1/2V _{DRM}	300	125	1/2V _{DRM}	20	3.5	TO220F	2.0	
1.35	25	20	—	1.0	—	15	25	0.2	125	1/2V _{DRM}	300	125	1/2V _{DRM}	20	3.4	TO220F	2.0	

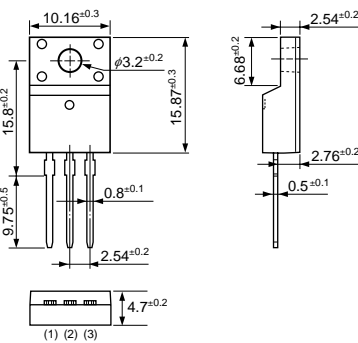
Electrical Characteristics												Package	Mass (g)
V _{GT} (V)		I _{GT} (mA)		Conditions T _c (°C)	V _{GD} (V) min	Conditions T _j (°C) V _D (V)		I _H (mA) typ	R _{th} (°C/W) max	V _F (V) max	Conditions IF (A)		
typ	max	typ	max	typ	typ	max	max	typ	max	max	max		
	1.5		30	25	0.1	125	480	12	4.0	1.4	10	TO-220S	1.5

Package Type (Dimensions)

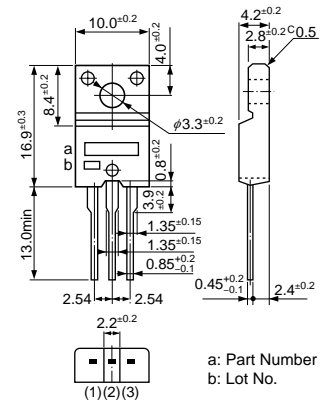
• TO-220



• TO-220F-A

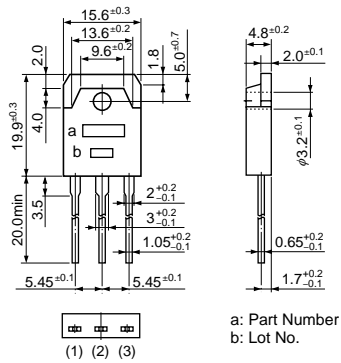


• TO-220F

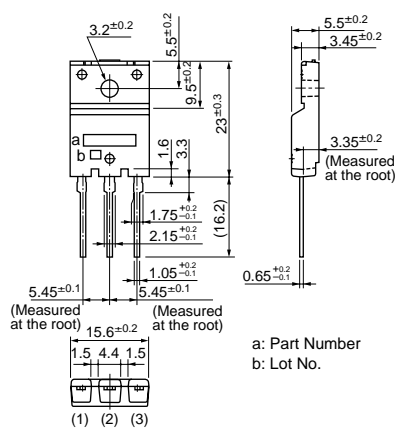


Pin No.	
(1)	Cathode (T ₁)
(2)	Anode (T ₂)
(3)	Gate (G)
()	Triacs

• TO-3P

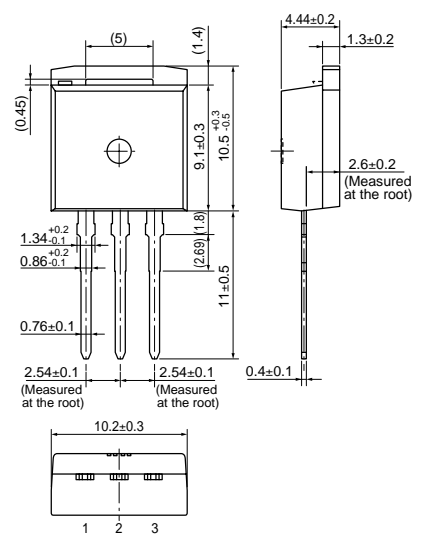


• TO-3PF

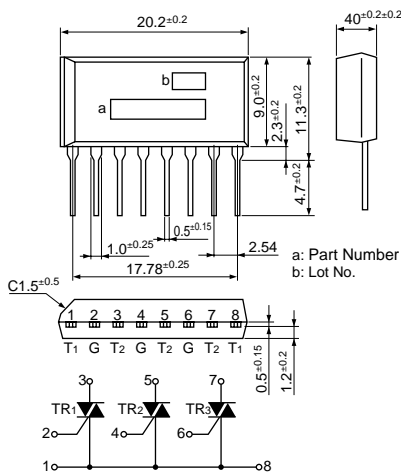


(1)	Terminal 1 (T ₁)
(2)	Terminal 2 (T ₂)
(3)	Gate (G)

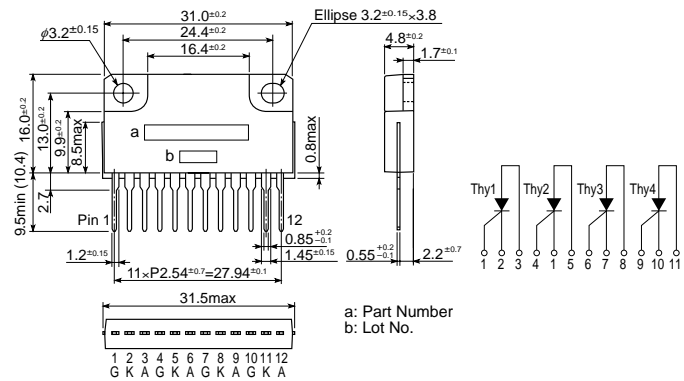
• TO-220S Straight



• STA8Pin



• SLA12Pin



(Unit: mm)