

GXV

SURGE VOLTAGE SUPPRESSORS

Pnp diffused silicon structure

Symmetric blocking characteristics

Suitable for SCR, BJT and IGBT applications

Type	V _R	Tolerance	Thyristor V _{DRM} V _{RRM}	I _{RM} [A] for base width				P _{RAV} [W]	P _{RSM} [kW]	Max allowable current
				1x10	1x100	1x1	1x10			
	[V]	[V]	[V]	[μs]	[μs]	[ms]	[ms]	[μs]	see curve #	
GXV20050-04	450	± 50	500	500	135	33	7.5	30*	350	6
GXV20050-05	550	± 50	600	500	135	33	7.5	30*	350	6
GXV21038-06	650	± 50	700	380	100	25	4.5	30*	350	5
GXV21038-07	750	± 50	800	380	100	25	4.5	30*	350	5
GXV21030-08	850	± 50	900	300	80	21	4	30*	350	4
GXV21030-09	950	± 50	1000	300	80	21	4	30*	350	4
GXV21026-10	1050	± 50	1100	260	67	18	3.6	30*	350	3
GXV21026-11	1150	± 50	1200	260	67	18	3.6	30*	350	3
GXV22023-12	1250	± 50	1300	230	58	15	3.4	30*	350	2
GXV22023-13	1350	± 50	1400	230	58	15	3.4	30*	350	2
GXV22020-14	1450	± 50	1500	200	50	13	3	30*	350	1
GXV22020-15	1550	± 50	1600	200	50	13	3	30*	350	1
GXV22030-16	1650	± 50	1800	300	80	21	4	60**	700	4
GXV22030-17	1750	± 50	1800	300	80	21	4	60**	700	4
GXV22030-18	1850	± 50	2000	300	80	21	4	60**	700	4
GXV22030-19	1950	± 50	2000	300	80	21	4	60**	700	4
GXV23026-20	2050	± 50	2200	260	67	18	3.6	60**	700	3
GXV23026-21	2150	± 50	2200	260	67	18	3.6	60**	700	3
GXV23026-22	2250	± 50	2400	260	67	18	3.6	60**	700	3
GXV23026-23	2350	± 50	2400	260	67	18	3.6	60**	700	3
GXV23023-24	2450	± 50	2600	230	58	15	3.4	60**	700	2
GXV23023-25	2550	± 50	2600	230	58	15	3.4	60**	700	2
GXV23023-26	2650	± 50	2800	230	58	15	3.4	60**	700	2
GXV23023-27	2750	± 50	2800	230	58	15	3.4	60**	700	2
GXV24020-28	2850	± 50	3000	200	50	13	3	60**	700	1
GXV24020-29	2950	± 50	3000	200	50	13	3	60**	700	1
GXV24020-30	3050	± 50	3200	200	50	13	3	60**	700	1
GXV24020-31	3150	± 50	3200	200	50	13	3	60**	700	1

Notice:

V_R Symmetrical avalanche voltage at I_A=20A, t_p=10 μs, T_{vj}=60 °C

I_{RM} Max. avalanche current for a single sine half wave pulse

P_{RSM} ... peak power losses for single 10 μs current surge

T_{vj} ... the initial virtual junction temperature is 60 °C

P_{RAV} ... Admissible continuous losses at R_{thja} < 1 K/W, T_a < 60 °C

* single side cooling: for single sided cooling the side carrying

the serial number shall be cooled

** double side cooling

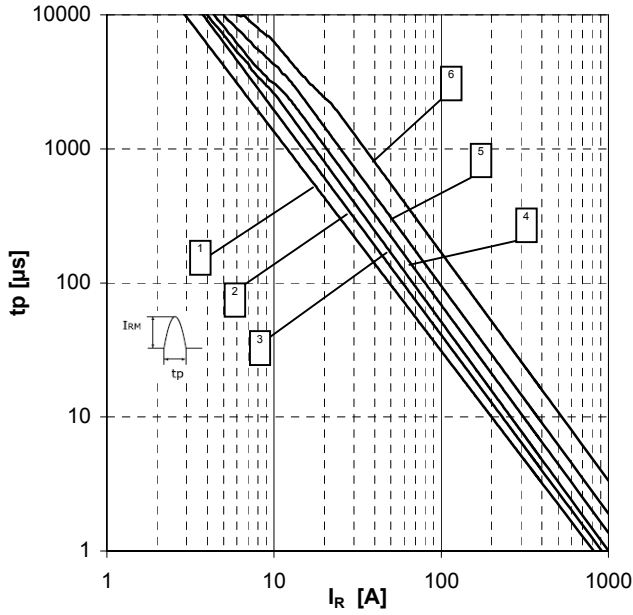
Major Ratings		Value	Units
V _R (T _J) ⁽¹⁾	Dependence of avalanche voltage V _R on junction temperature	V _R (T) = V _{RO} [1 + 1.1x10 ⁻³ (T - 60°C)]	V
C _J	Junction capacitance U _R = 0V, T _J =60°C	1100 or 550 ⁽²⁾	pF
R _{th}	Thermal resistance junction-heatsink	0.5 or 0.25 ⁽²⁾	k/W
T _J T _{STG}	Operating storage temperature range	-40..125	°C
	Admissible acceleration (vibration)	10g	m/s ²
M _U	Mounting torque	3.5	Nm

1) V_R(60°C) = V_{RO}; V_R(25°C) = 0,93 x V_{RO}; V_R(125°C) = 1,07 x V_{RO}

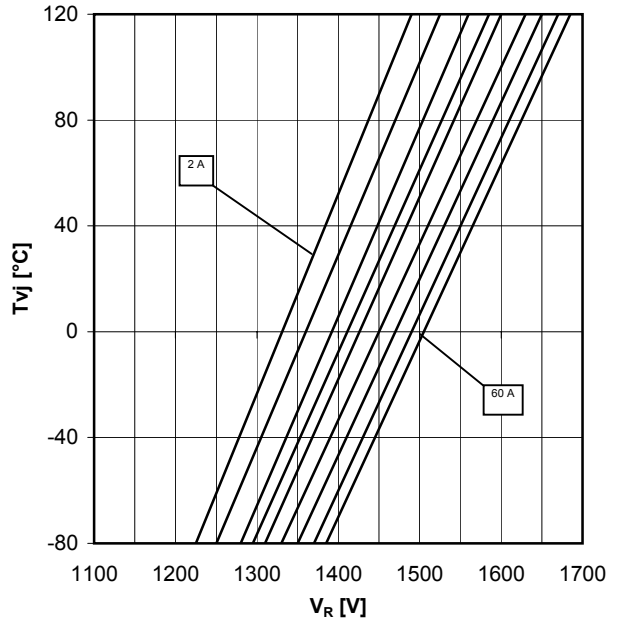
2) GXV 5SSB 50X0400 to 20X1500 C_J = 1100pF R_{th} = 0.5 K/W
GXV 5SSB 30X1600 to 20X3100 C_J = 550pF R_{th} = 0.25 K/W

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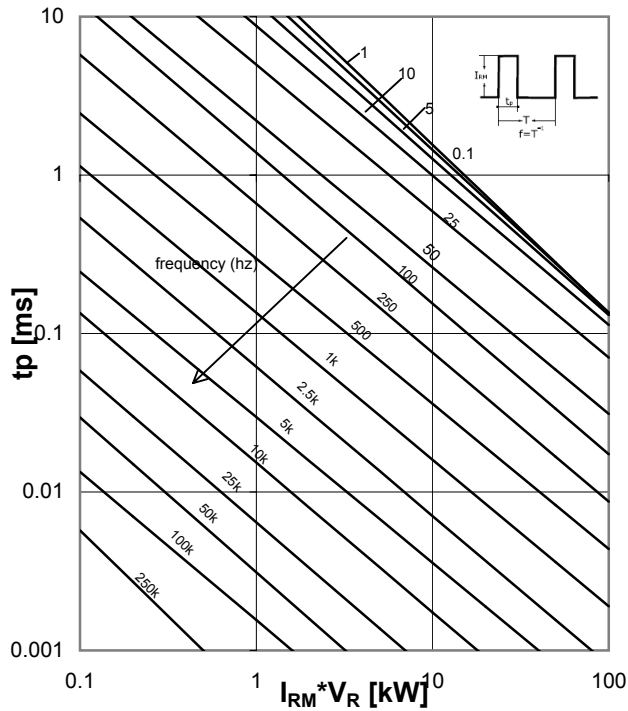
Max allowable current peak vs pulse width



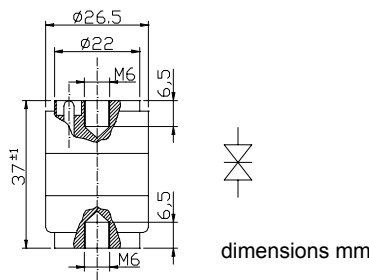
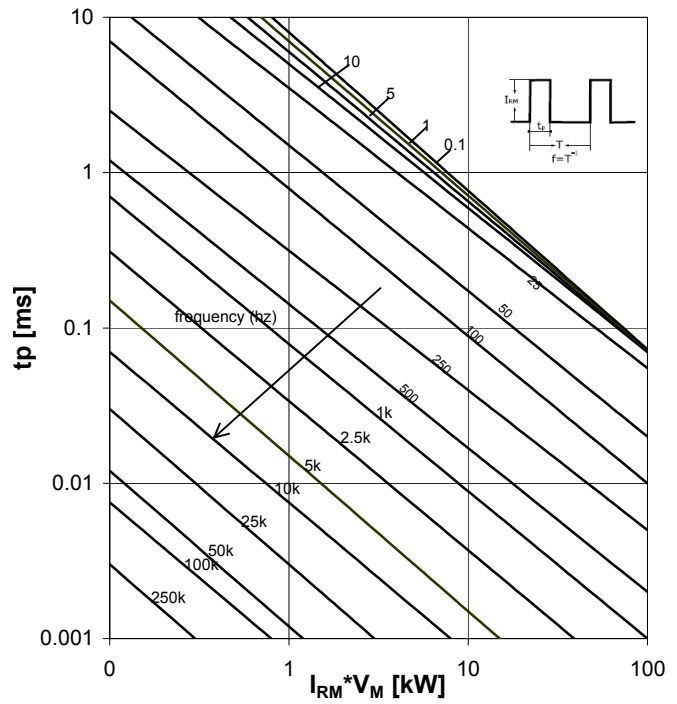
Typical behaviour of avalanche voltage vs Tj
(for type GXV22020-15 with tp = 15 µs)



Product of max. admissible square wave power in function of pulse width tp
GXV24020 - GXV22030



Product of max. admissible square wave power in function of pulse width tp
(GXV22020 - GXV20050)



In the interest of product improvement Green Power Solutions reserves the right to change any specification given in this data sheet without notice.