Ordering number:EN1878C

SANYO

DTM6-N

Silicon Planar Type

6A Bidirectional Thyristor

Features

- Insulation type.
- Peak OFF-state voltage : 200 to 600V.
- RMS ON-state current : 6A.
- TO-220 package.

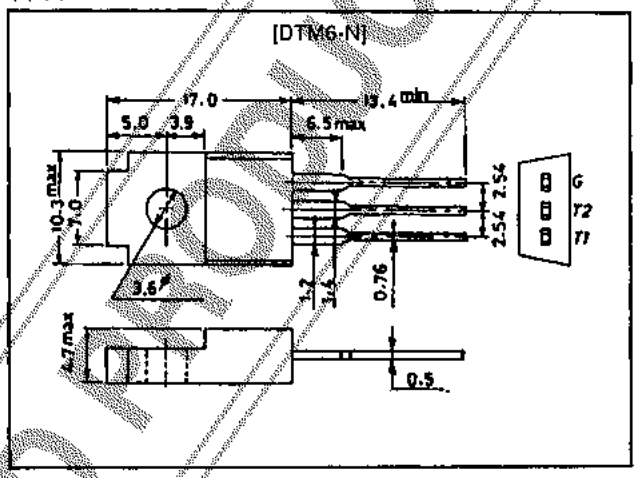
*:The gate trigger mode is shown below.

Trigger mode	T2	T1	G
Ⅰ	+	−	+
Ⅱ	+	−	−
Ⅲ	−	+	+
Ⅳ	−	+	−

Package Dimensions

unit:mm

1144



Specifications

Absolute Maximum Ratings at Ta = 25°C

Parameter	Symbol	Conditions	DTC6C-N	DTC6E-N	DTC6G-N	Unit
Repetitive Peak OFF-State Voltage	V_{DRM}		200	400	600	V
RMS ON-State Current	$I_{T(RMS)}$	Tc=70°C, single-phase full-wave	→	→	6	A
Surge ON-State Current	I_{TSM}	Peak 1 cycle, 50Hz	→	→	60	A
Amperes Squared-Seconds	I^2T	1ms≤t≤10ms	→	→	18	A²s
Peak Gate Power Dissipation	P_{GM}	f≥50Hz, duty≤10%	→	→	5	W
Average Gate Power Dissipation	$P_{G(AV)}$		→	→	0.5	W
Peak Gate Current	I_{GM}	f≥50Hz, duty≤10%	→	→	±2	A
Peak Gate Voltage	V_{GM}	f≥50Hz, duty≤10%	→	→	±10	V
Junction Temperature	T_j		→	→	125	°C
Storage Temperature	Tstg		→	→	−40 to +125	°C
Weight			→	→	2.1	g

Electrical Characteristics at Ta = 25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Repetitive Peak OFF-State Current	I_{DRM}	Tj=125°C, $V_D=V_{DRM}$			2	mA
Peak ON-State Voltage	V_{TM}	I_{TM}=9A			1.5	V
Critical Rate of Rise of OFF-State Voltage	(dv/dt)C	Tj=125°C, V_D=200V (C), 400V (E to G)	10			V/μs
Holding Current	I_H	R_L=100Ω			50	mA
Gate Trigger Current* (Ⅰ)	I_{GT}	V_D=12V, R_L=20Ω			30	mA
Gate Trigger Current (Ⅱ)	I_{GT}	V_D=12V, R_L=20Ω			30	mA
Gate Trigger Current (Ⅲ)	I_{GT}	V_D=12V, R_L=20Ω			50	mA
Gate Trigger Current (Ⅳ)	I_{GT}	V_D=12V, R_L=20Ω			30	mA
Gate Trigger Voltage* (Ⅰ)	V_{GT}	V_D=12V, R_L=20Ω			2	V
Gate Trigger Voltage (Ⅱ)	V_{GT}	V_D=12V, R_L=20Ω			2	V
Gate Trigger Voltage (Ⅲ)	V_{GT}	V_D=12V, R_L=20Ω			2	V
Gate Trigger Voltage (Ⅳ)	V_{GT}	V_D=12V, R_L=20Ω			2	V
Gate Nontrigger Voltage	V_{GD}	Tc=125°C, $V_D=V_{DRM}$	0.2			V
Thermal Resistance	Rth(j-c)	Between junction and case, AC			3.8	°C/W