

Fig. 6 Surge on-state current vs. pulse length, half-sine wave

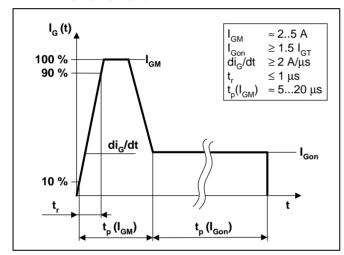


Fig. 8 Recommended gate current waveform

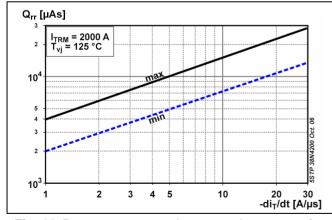


Fig. 10 Reverse recovery charge vs. decay rate of on-state current

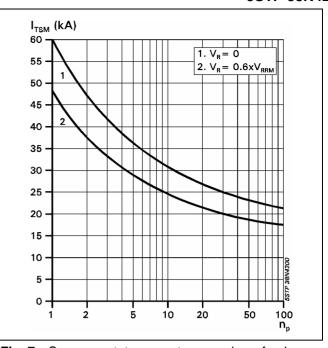


Fig. 7 Surge on-state current vs. number of pulses, half-sine wave, 10 ms, 50Hz

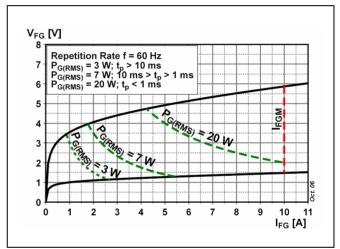


Fig. 9 Max. peak gate power loss

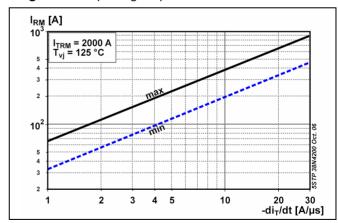
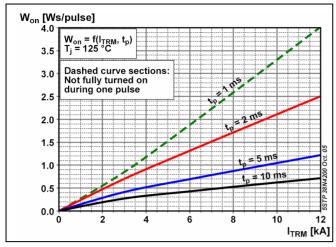


Fig. 11 Peak reverse recovery current vs. decay rate of on-state current

Turn-on and Turn-off losses



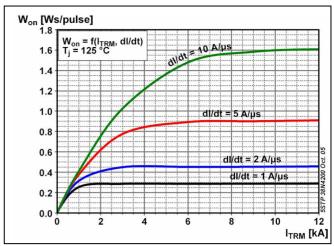
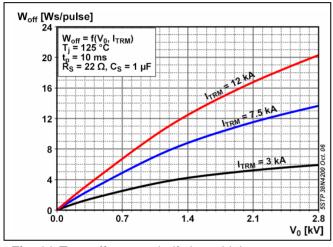


Fig. 12 Turn-on energy, half sinusoidal waves

Fig. 13 Turn-on energy, rectangular waves



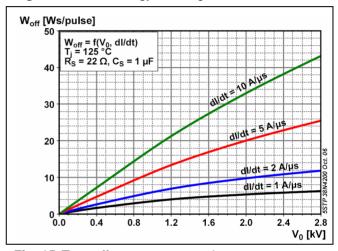
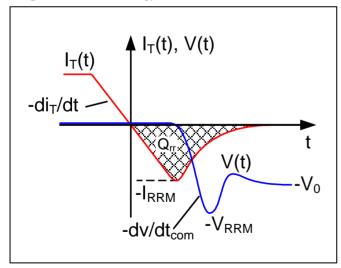


Fig. 14 Turn-off energy, half sinusoidal waves

Fig. 15 Turn-off energy, rectangular waves

Total power loss for repetitive waveforms:



 $P_{TOT} = P_T + W_{on} \cdot f + W_{off} \cdot f$

where

$$P_{T} = \frac{1}{T} \int_{0}^{T} I_{T} \cdot V_{T}(I_{T}) dt$$

Fig. 16 Current and voltage waveforms at turn-off

Fig. 17 Relationships for power loss

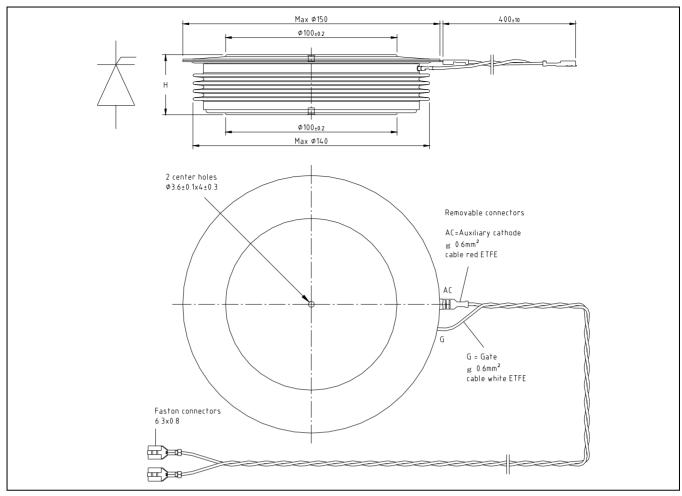


Fig. 18 Device Outline Drawing

Related documents:

5SYA 2020	Design of RC-Snubber for Phase Control Applications
5SYA 2049	Voltage definitions for phase control thyristors and diodes
5SYA 2051	Voltage ratings of high power semiconductors
5SYA 2034	Gate-Drive Recommendations for PCT's
5SYA 2036	Recommendations regarding mechanical clamping of Press Pack High Power Semiconductors
5SZK 9104	Specification of environmental class for pressure contact diodes, PCTs and GTO, STORAGE available on request, please contact factory
5SZK 9105	Specification of environmental class for pressure contact diodes, PCTs and GTO, TRANSPORTATION available on request, please contact factory

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