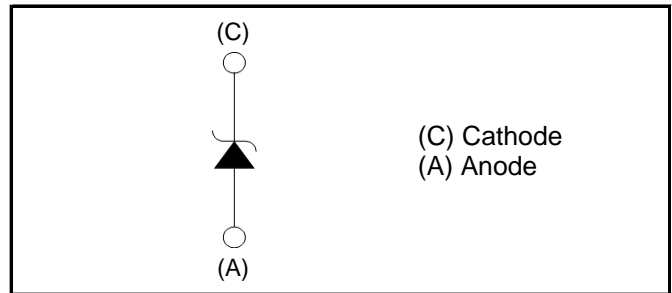


V_R	650V
I_F	12A* ¹
Q_C	18nC

●Features

- 1) Shorter recovery time
- 2) Reduced temperature dependence
- 3) High-speed switching possible

●Inner circuit



●Construction

Silicon carbide epitaxial planer type

Schottky diode

●Absolute maximum ratings (T_j = 25°C)

Parameter	Symbol	Value	Unit
Reverse voltage (repetitive peak)	V_{RM}	650	V
Reverse voltage (DC)	V_R	650	V
Continuous forward current	I_F	12* ¹	A
Surge no repetitive forward current	I_{FSM}	45* ²	A
		170* ³	A
		36* ⁴	A
Repetitive peak forward current	I_{FRM}	49* ⁵	A
Junction temperature	T _j	175	°C
Range of storage temperature	T _{stg}	-55 to +175	°C

*1 Limited by T_j *2 PW=8.3ms sinusoidal, T_j=25°C *3 PW=10μs square, T_j=25°C

*4 PW=8.3ms sinusoidal, T_j=150°C *5 Duty cycle=10%, limited by T_j

●Electrical characteristics (T_j = 25°C)

Parameter	Symbol	Conditions	Values			Unit
			Min.	Typ.	Max.	
DC blocking voltage	V _{DC}	I _R =0.24mA	600	-	-	V
Forward voltage	V _F	I _F =12A, T _j =25°C	-	1.35	1.55	V
		I _F =12A, T _j =150°C	-	1.55	-	V
		I _F =12A, T _j =175°C	-	1.63	-	V
Reverse current	I _R	V _R =600V, T _j =25°C	-	2.4	240	μA
		V _R =600V, T _j =150°C	-	36	-	μA
		V _R =600V, T _j =175°C	-	84	-	μA
Total capacitance	C	V _R =1V, f=1MHz	-	438	-	pF
		V _R =600V, f=1MHz	-	44	-	pF
Total capacitive charge	Q _C	V _R =400V, di/dt=350A/μs	-	18	-	nC
Switching time	t _c	V _R =400V, di/dt=350A/μs	-	16	-	ns

●Electrical characteristic curves

Fig.1 $V_F - I_F$ Characteristics

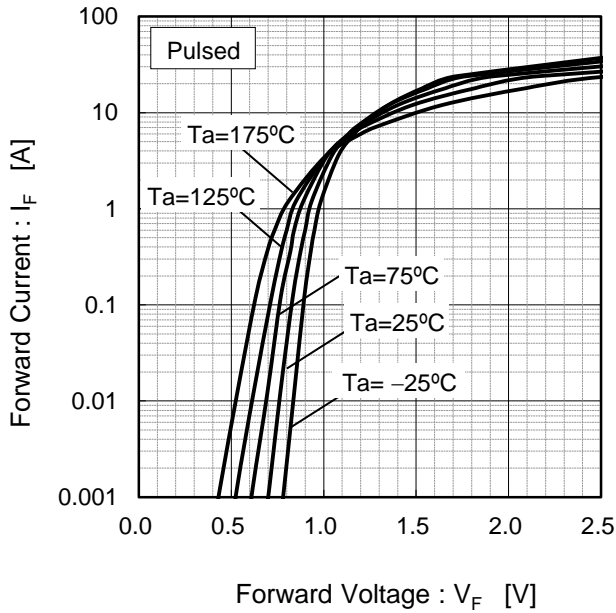


Fig.2 $V_F - I_F$ Characteristics

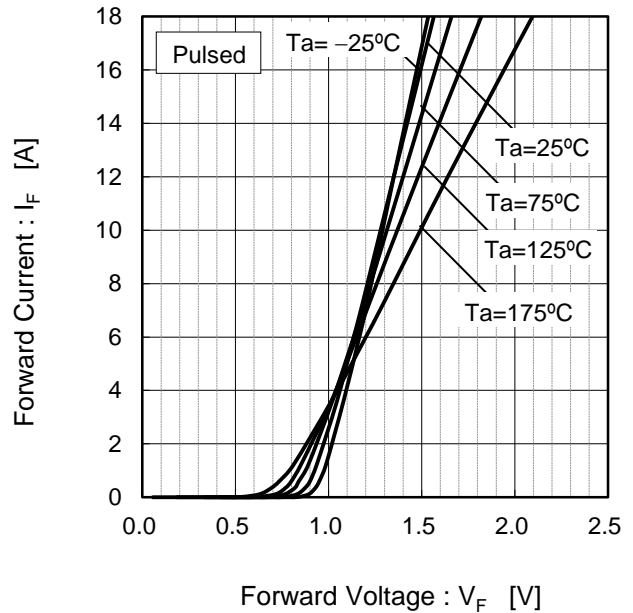


Fig.3 $V_R - I_R$ Characteristics

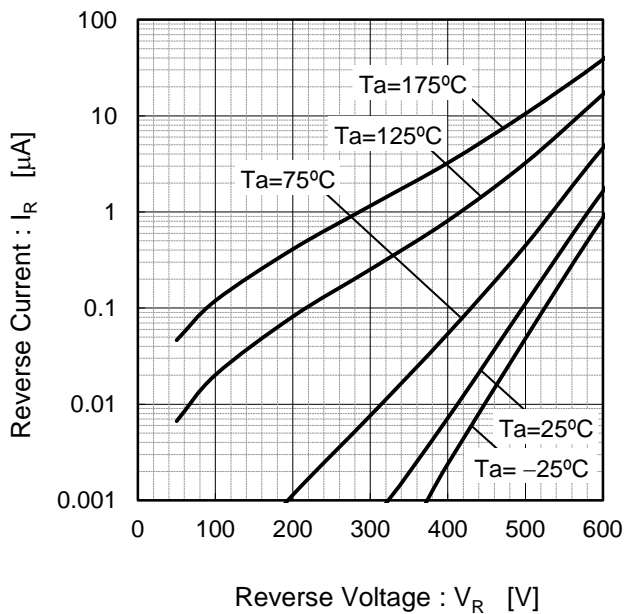
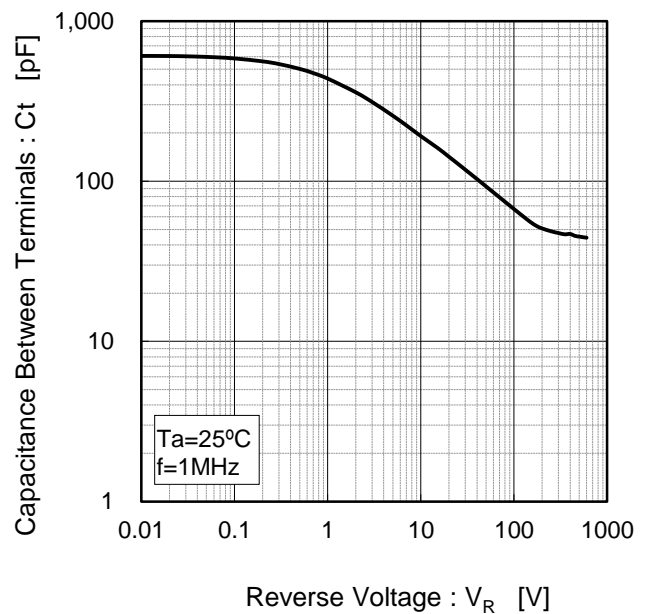


Fig.4 $V_R - C_t$ Characteristics



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