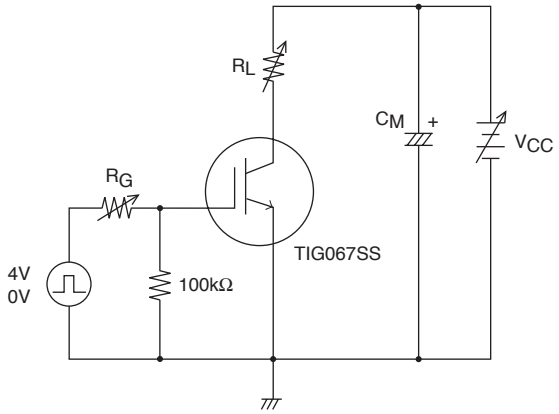
Electrical Characteristics at Ta=25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CES}$	I_C=2mA, V_{GE}=0V	400			V
Collector-to-Emitter Cutoff Current	I_{CES}	V_{CE}=320V, V_{GE}=0V			10	μA
Gate-to-Emitter Leakage Current	I_{GES}	V_{GE}=±6V, V_{CE}=0V			±10	μA
Gate-to-Emitter Threshold Voltage	$V_{GE(off)}$	V_{CE}=10V, I_C=1mA	0.4		1.0	V
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	I_C=150A, V_{GE}=4V		3.8	5	V
Input Capacitance	Cies	V_{CE}=10V, f=1MHz		5100		pF
Output Capacitance	Coes			59		pF
Reverse Transfer Capacitance	Cres			43		pF
Fall Time	t_f	I_C=150A, V_{CC}=320V, Resistor load V_{GE}=4V, R_G=36Ω		270		ns

Product parametric performance is indicated in the Electrical Characteristics for the listed test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.

Fig1 Large Current R Load Switching Circuit

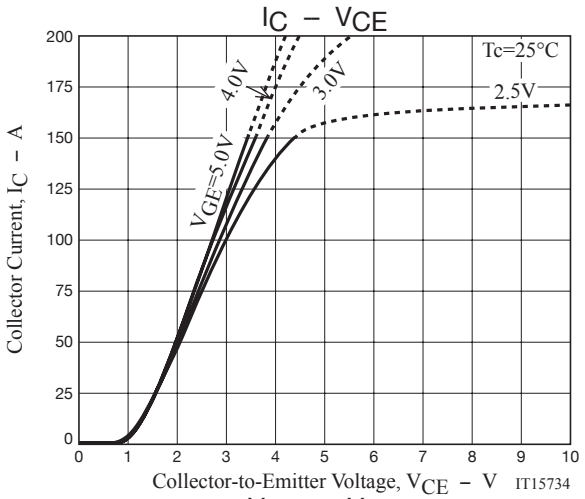


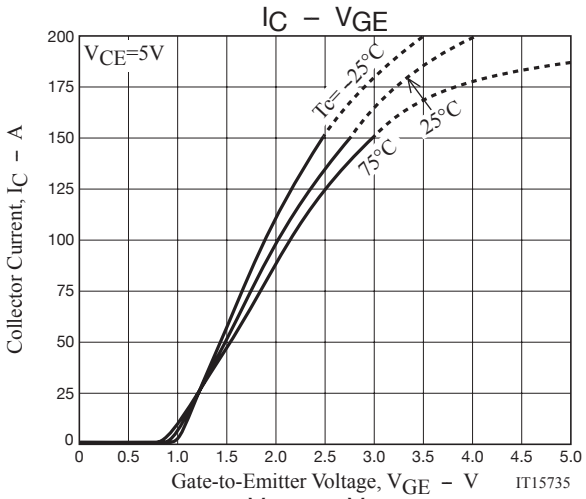
Note1. Gate Series Resistance $R_G \geq 36\Omega$ is recommended for protection purpose at the time of turn OFF. However, if dv / dt ≤ 1500 / μs is satisfied at customer's actual set evaluation, $R_G < 36\Omega$ can also be used.

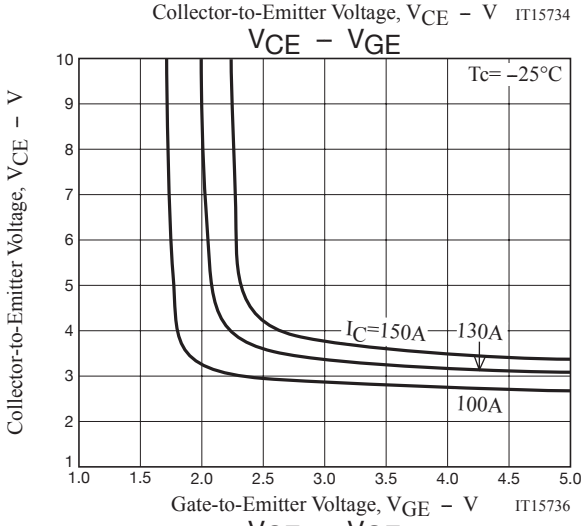
Note2. The collector voltage gradient dv / dt must be smaller than 1500V / μs to protect the device when it is turned off.

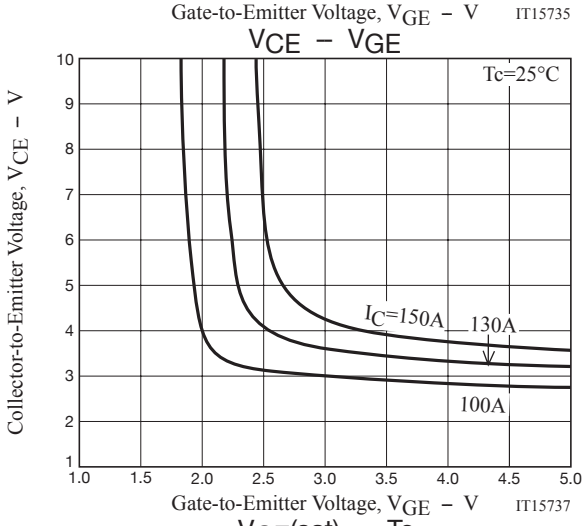
ORDERING INFORMATION

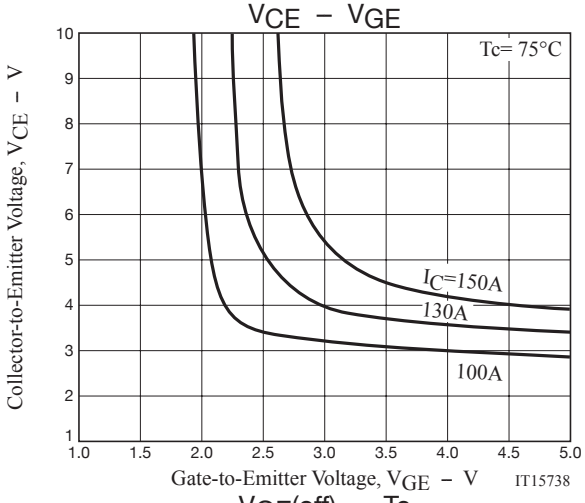
Device	Package	Shipping	memo
TIG067SS-TL-2W	SOIC8	2,500pcs./reel	Pb-Free and Halogen Free

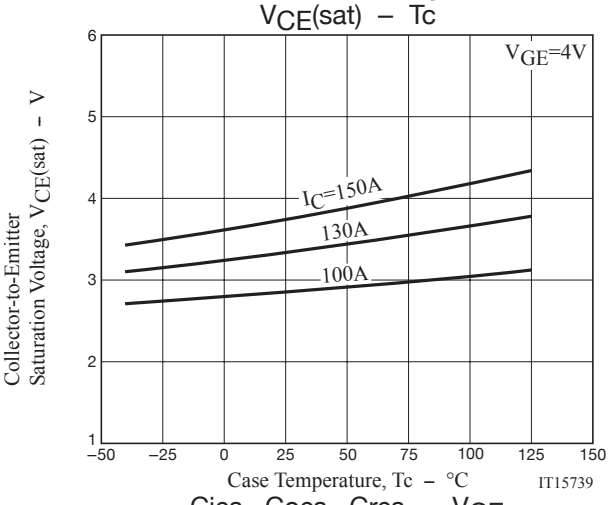


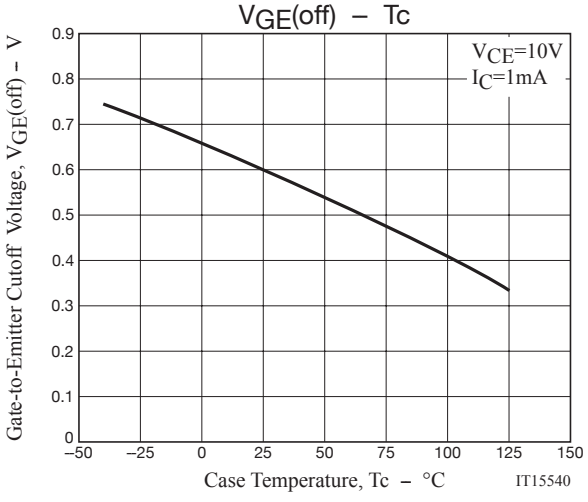


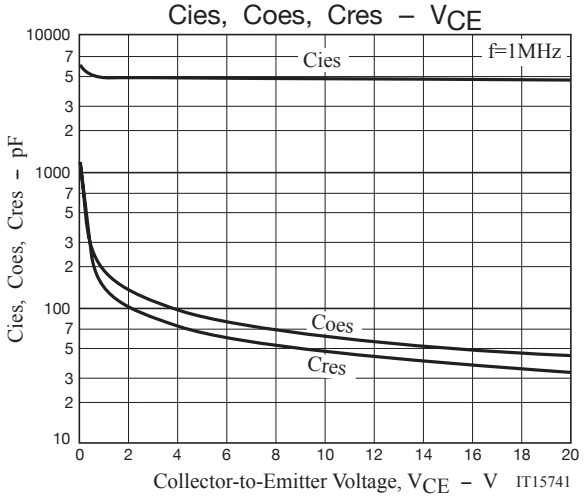




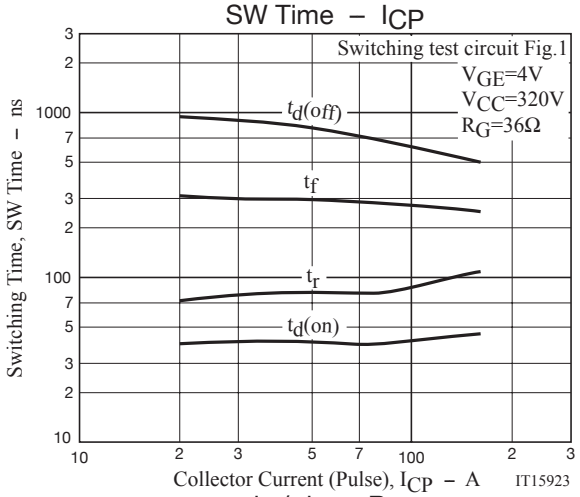




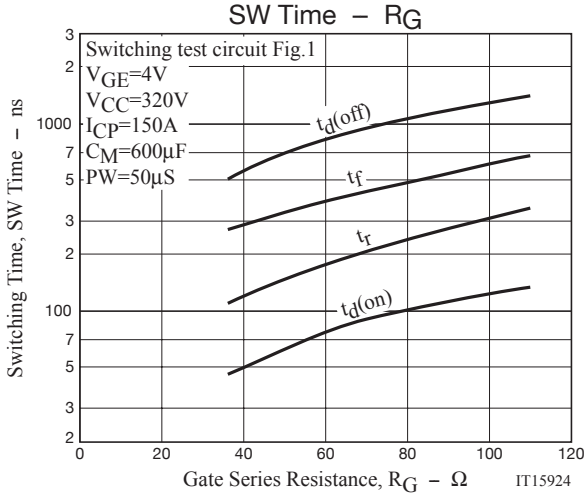




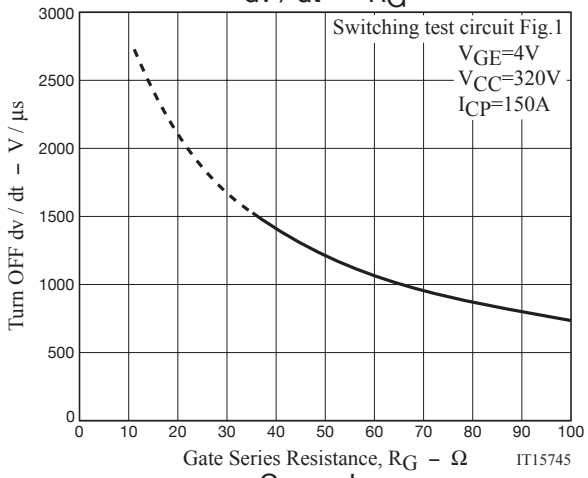
SW Time – I_{CP}



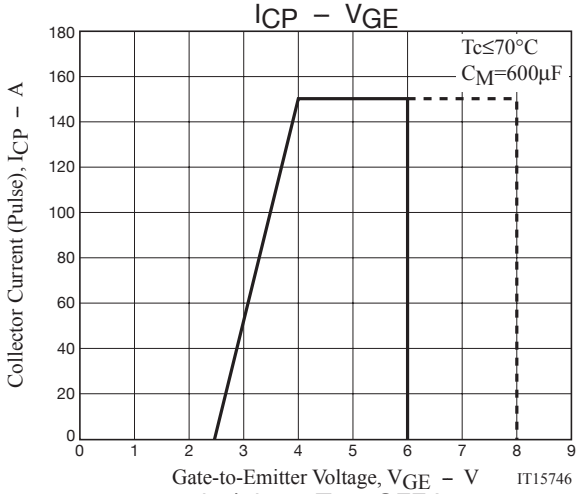
SW Time – R_G



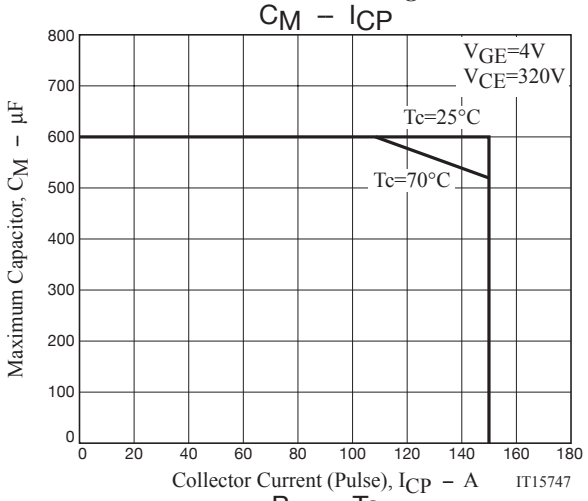
dv / dt – R_G



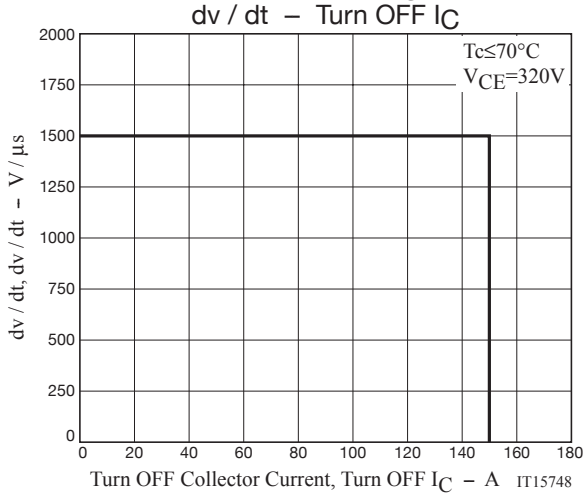
I_{CP} – V_{GE}



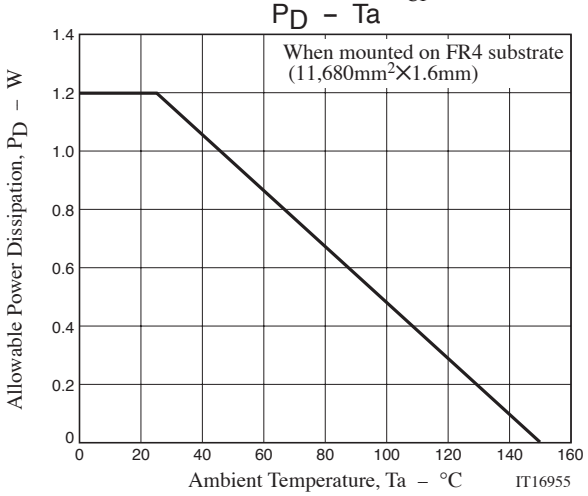
C_M – I_{CP}



dv / dt – Turn OFF I_C



P_D – Ta

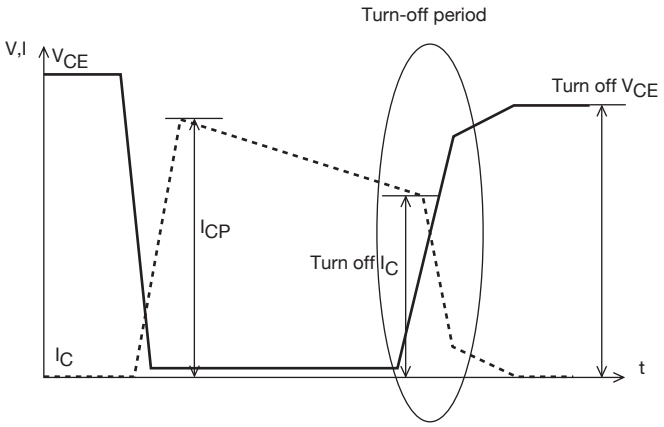


Definition of dv/dt

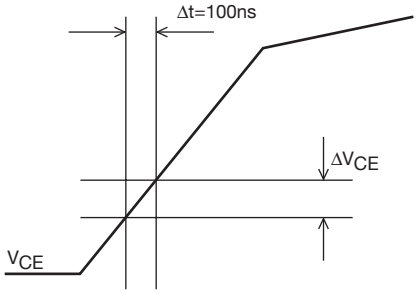
dv/dt is defined as the maximum slope of the below V_{CE} curve during turn-off period.

$dv/dt=\Delta V_{CE}/\Delta t=\Delta V_{CE}/100ns$

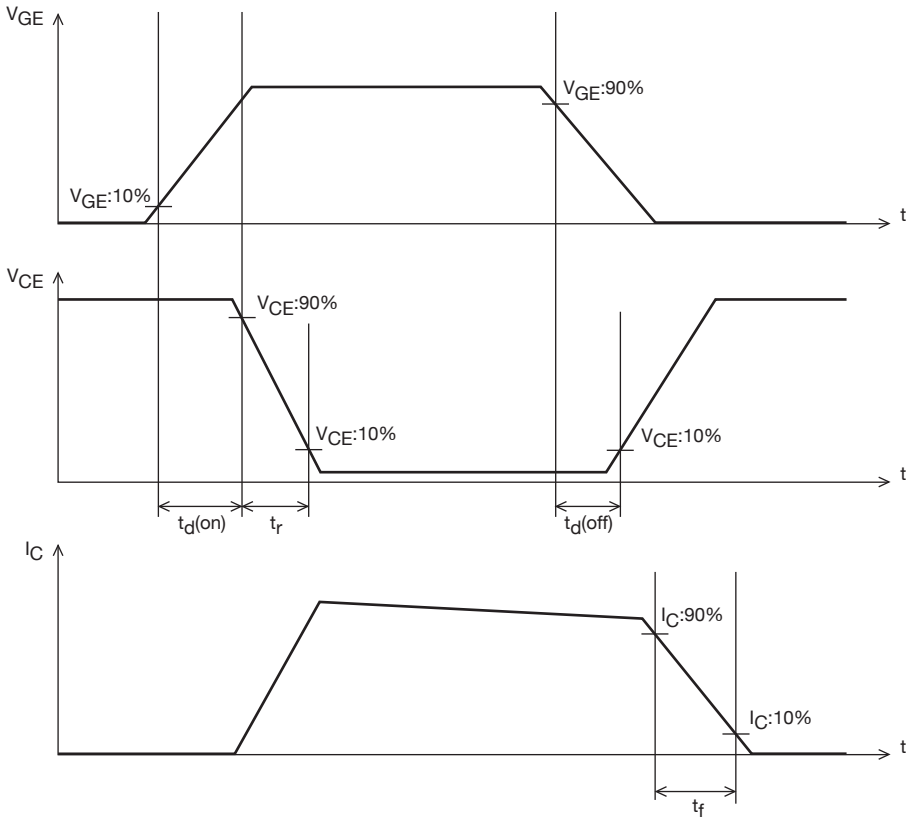
Overall waveform



Enlarged picture of turn-off period

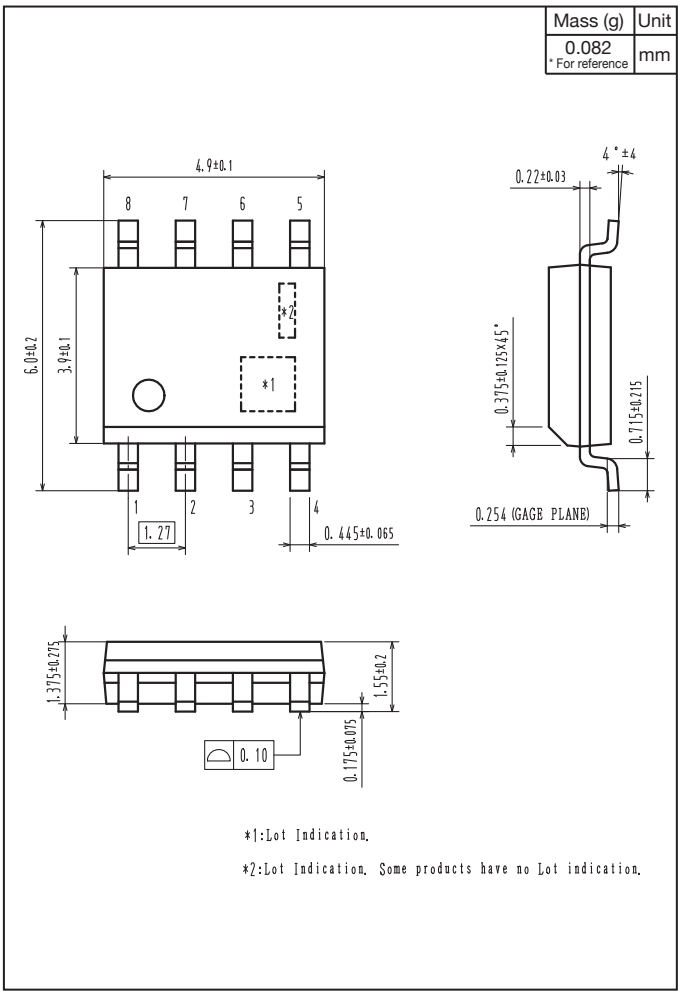


Definition of Switching Time



Outline Drawing

TIG067SS-TL-2W



Land Pattern Example