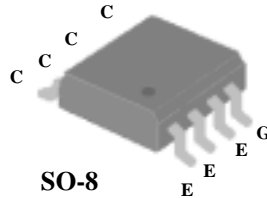
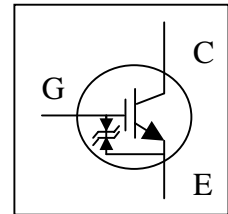


- ▼ High Input Impedance
- ▼ High Pick Current Capability
- ▼ 4.5V Gate Drive
- ▼ Strobe Flash Applications



$V_{CE}$	450V
$I_{CP}$	150A



## Absolute Maximum Ratings

Symbol	Parameter	Rating	Units
$V_{CE}$	Collector-Emitter Voltage	450	V
$V_{GE}$	Gate-Emitter Voltage	$\pm 6$	V
$V_{GEP}$	Pulsed Gate-Emitter Voltage	$\pm 8$	V
$I_{CP}$	Pulsed Collector Current	150	A
$P_D @ T_C = 25^\circ C^1$	Maximum Power Dissipation	2.5	W
$T_{STG}$	Storage Temperature Range	-55 to 150	$^\circ C$
$T_J$	Operating Junction Temperature Range	-55 to 150	$^\circ C$

## Electrical Characteristics @ $T_j = 25^\circ C$ (unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Units
$I_{GES}$	Gate-Emitter Leakage Current	$V_{GE} = \pm 6V, V_{CE} = 0V$	-	-	10	$\mu A$
$I_{CES}$	Collector-Emitter Leakage Current ( $T_j = 25^\circ C$ )	$V_{CE} = 450V, V_{GE} = 0V$	-	-	10	$\mu A$
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$V_{GE} = 4.5V, I_{CP} = 150A$ (Pulsed)	-	6	8	V
$V_{GE(th)}$	Gate Threshold Voltage	$V_{CE} = V_{GE}, I_C = 250\mu A$	0.35	-	1.2	V
$Q_g$	Total Gate Charge	$I_C = 50A$	-	64.5	-	nC
$Q_{ge}$	Gate-Emitter Charge	$V_{CE} = 360V$	-	7	-	nC
$Q_{gc}$	Gate-Collector Charge	$V_{GE} = 5V$	-	30	-	nC
$t_{d(on)}$	Turn-on Delay Time	$V_{CC} = 225V$	-	11.5	-	ns
$t_r$	Rise Time	$I_C = 50A$	-	24.5	-	ns
$t_{d(off)}$	Turn-off Delay Time	$R_G = 25\Omega$	-	150	-	ns
$t_f$	Fall Time	$V_{GE} = 5V$	-	3.3	-	$\mu s$
$C_{ies}$	Input Capacitance	$V_{GE} = 0V$	-	2227	-	pF
$C_{oes}$	Output Capacitance	$V_{CE} = 25V$	-	200	-	pF
$C_{res}$	Reverse Transfer Capacitance	$f = 1.0MHz$	-	79	-	pF
$R_{thJA}^1$	Thermal Resistance Junction-Ambient		-	-	50	$^\circ C/W$

### Notes:

1. Surface mounted on 1 in<sup>2</sup> copper pad of FR4 board ; 125 $^\circ C/W$  when mounted on Min. copper pad.

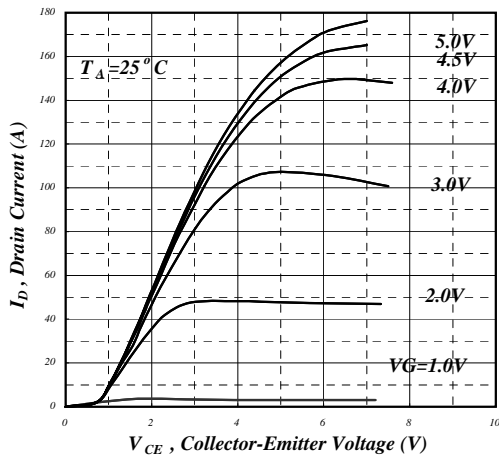


Fig 1. Typical Output Characteristics

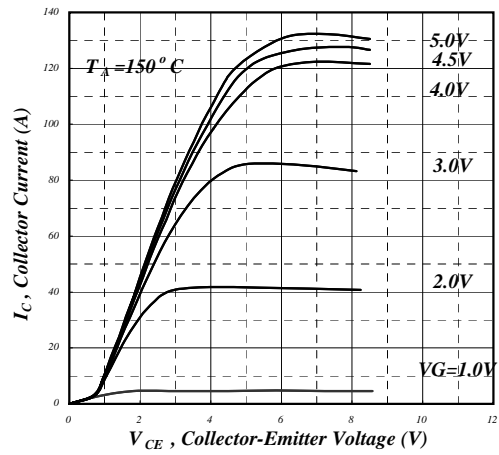


Fig 2. Typical Output Characteristics

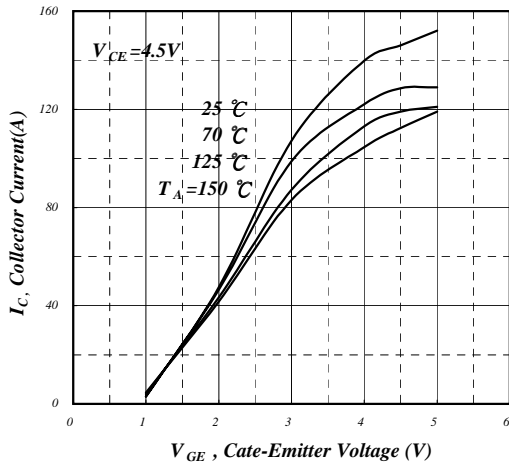


Fig 3. Collector Current v.s. Gate-Emitter Voltage

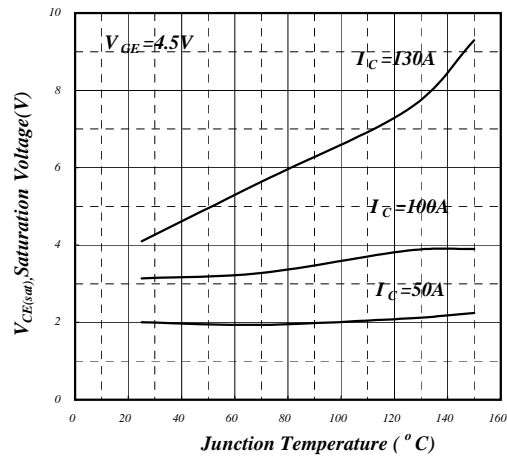


Fig 4. Collector-Emitter Saturation Voltage v.s. Junction Temperature

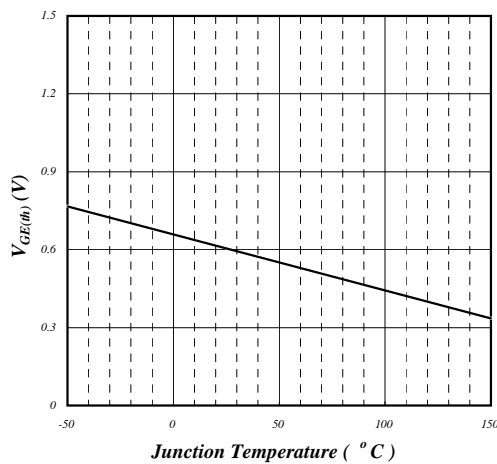


Fig 5. Gate Threshold Voltage v.s. Junction Temperature

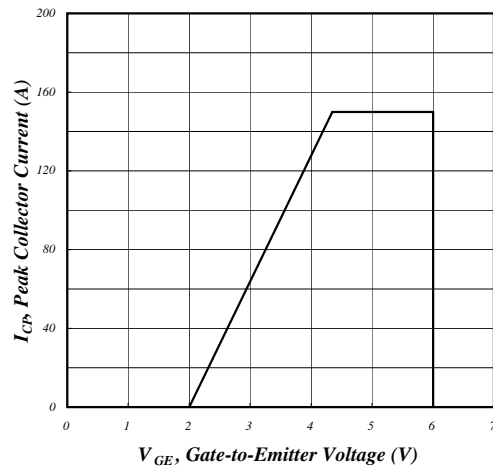


Fig 6. Minimum Gate Drive Area

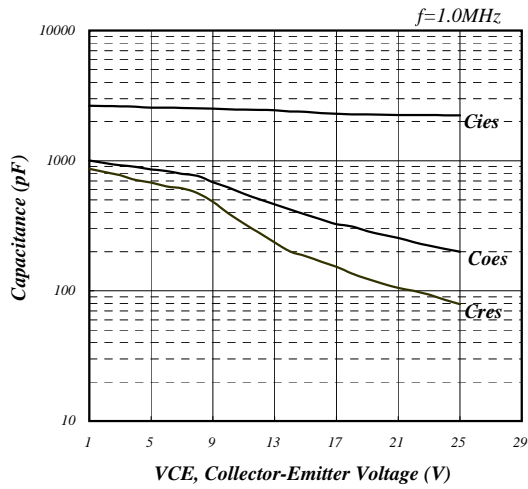


Fig 7. Typical Capacitance Characteristics

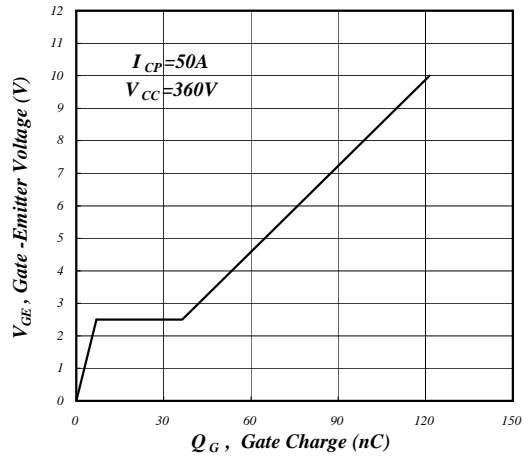


Fig 8. Gate Charge Waveform

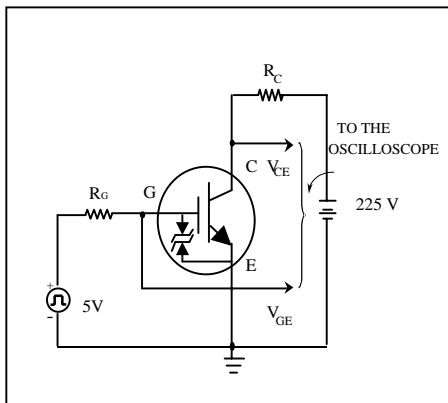


Fig 9. Switching Time Test Circuit

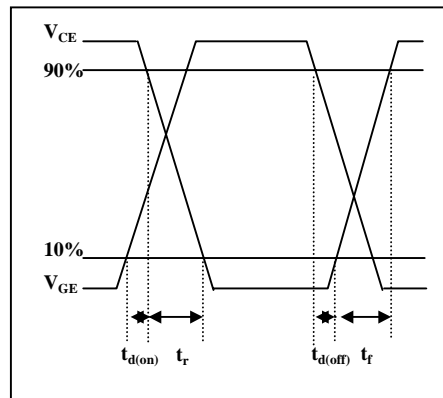


Fig 10. Switching Time Waveform

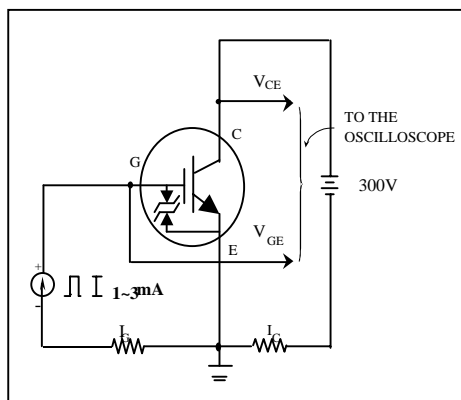


Fig 11. Gate Charge Test Circuit

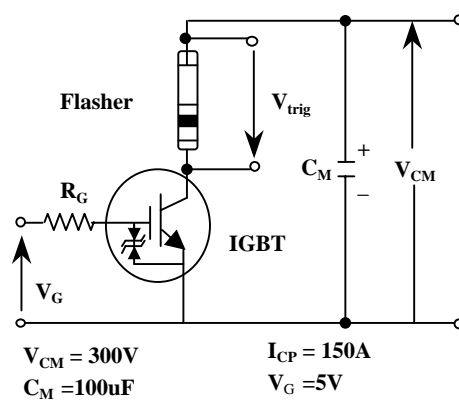


Fig 12. Application Test Circuit