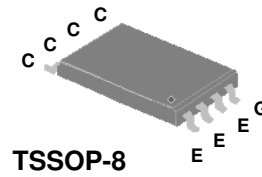




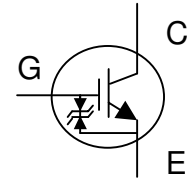
Insulated Gate Bipolar Power Transistor

- High Input Impedance
- High Peak Current Capability
- Low 3.0V Gate Drive
- Strobe Flash Applications
- RoHS-compliant, halogen-free package



TSSOP-8

V_{CE}	400V
I_{CP}	150A



Absolute Maximum Ratings

Symbol	Parameter	Rating	Units
V_{CE}	Collector-Emitter Voltage	400	V
V_{GEP}	Peak Gate-Emitter Voltage	±6	V
I_{CP}	Pulsed Collector Current	150	A
P_D at $T_A=25^\circ C^1$	Maximum Power Dissipation	1	W
T_{STG}	Storage Temperature Range	-55 to 150	°C
T_J	Junction Temperature Range	-55 to 150	°C

Electrical Specifications at $T_J=25^\circ C$ (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	µA
I_{CES}	Collector-Emitter Leakage Current	$V_{CE} = 400V, V_{GE} = 0V$	-	-	10	µA
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$V_{GE} = 3V, I_{CP} = 150A$ (Pulsed)	-	4.5	9	V
$V_{GE(th)}$	Gate Threshold Voltage	$V_{CE} = V_{GE}, I_C = 250\mu A$	0.3	-	1.2	V
Q_g	Total Gate Charge	$I_C = 40A$	-	86	138	nC
Q_{ge}	Gate-Emitter Charge	$V_{CE} = 200V$	-	5.4	-	nC
Q_{gc}	Gate-Collector Charge	$V_{GE} = 4V$	-	29	-	nC
$t_{d(on)}$	Turn-on Delay Time	$V_{CC} = 320V$	-	900	-	ns
t_r	Rise Time	$I_C = 150A$	-	1.6	-	µs
$t_{d(off)}$	Turn-off Delay Time	$R_G = 10\Omega$	-	170	-	ns
t_f	Fall Time	$V_{GE} = 3V$	-	2.3	-	µs
C_{ies}	Input Capacitance	$V_{GE} = 0V$	-	5170	8270	pF
C_{oes}	Output Capacitance	$V_{CE} = 30V$	-	45	-	pF
C_{res}	Reverse Transfer Capacitance	$f = 1.0MHz$	-	27	-	pF
R_{thJA}^1	Thermal Resistance Junction-Ambient		-	-	125	°C/W

Notes:

1. Surface mounted on 1 in² copper pad of FR4 board

Ordering Information

AP26G40GEO-HF-3TR : in RoHS-compliant halogen-free TSSOP-8 shipped on tape and reel (3000 pcs/reel)



Typical Electrical Characteristics

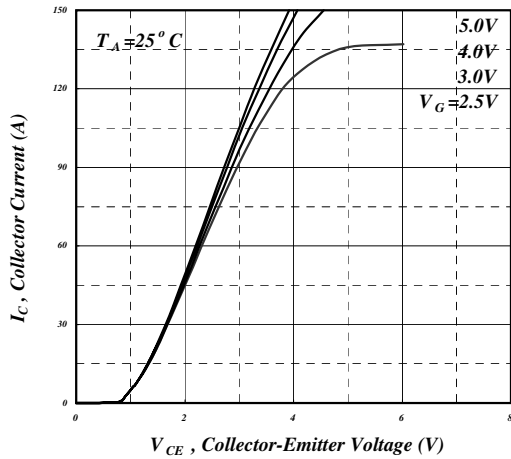


Fig 1. Typical Output Characteristics

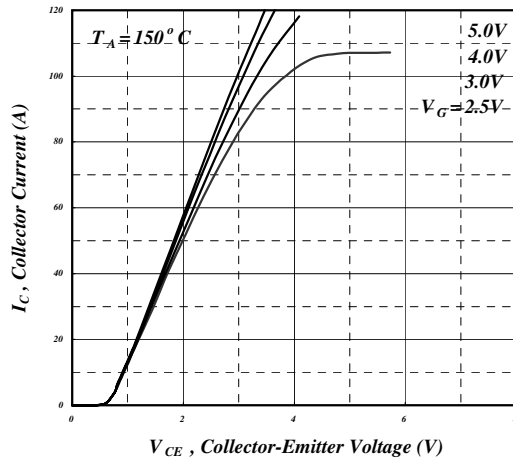


Fig 2. Typical Output Characteristics

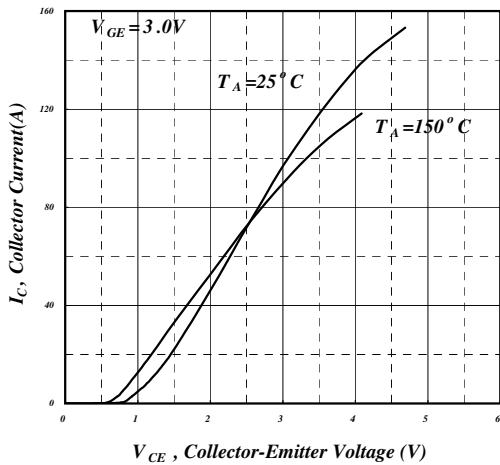


Fig 3. Typical Saturation Voltage Characteristics

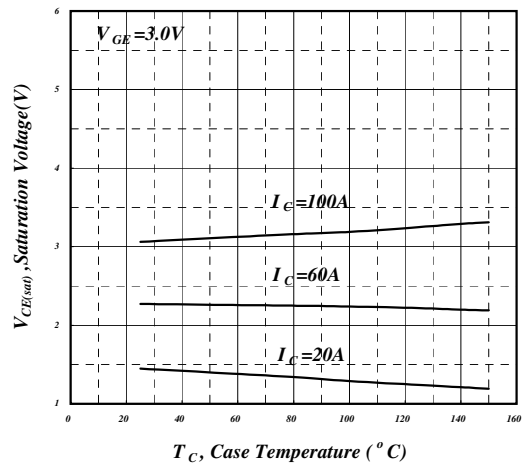


Fig 4. Collector- Emitter Saturation Voltage vs. Junction Temperature

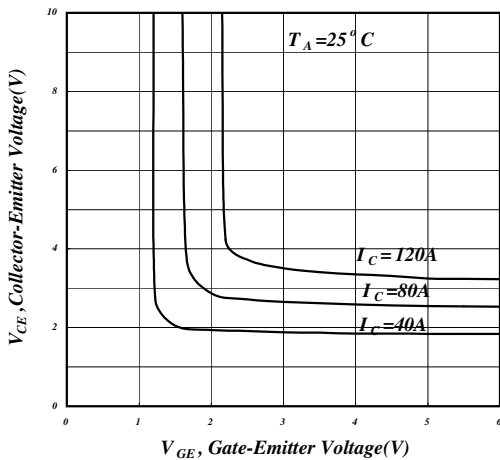


Fig 5. Collector Current vs. Gate-Emitter Voltage

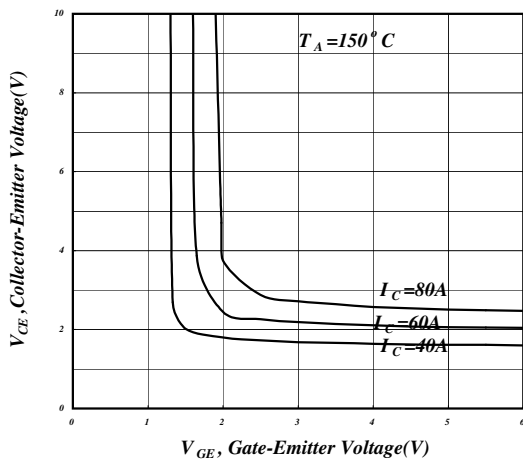


Fig 6. Collector Current vs. Gate-Emitter Voltage



Typical Electrical Characteristics (cont.)

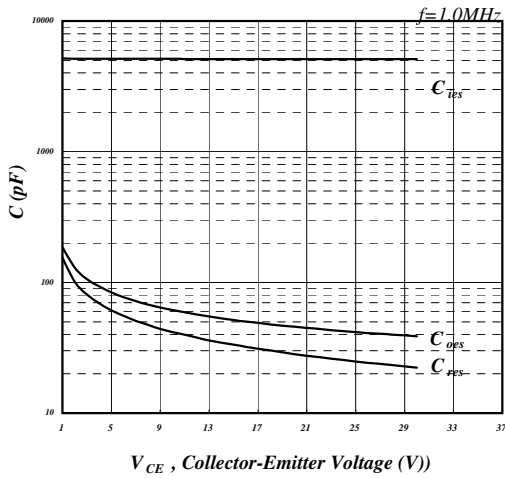


Fig 7. Typical Capacitance Characteristics

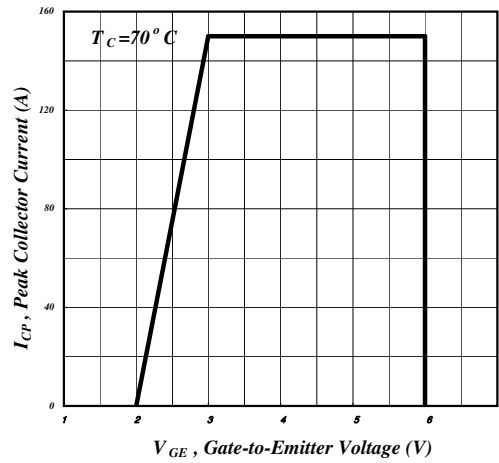


Fig 8. Maximum Pulse Collector Current

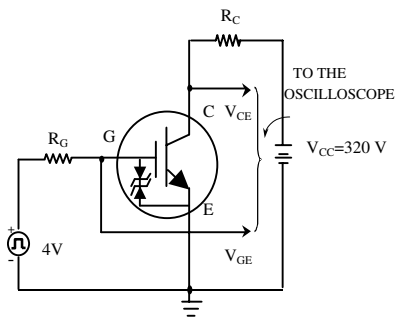


Fig 9. Switching Time Test Circuit

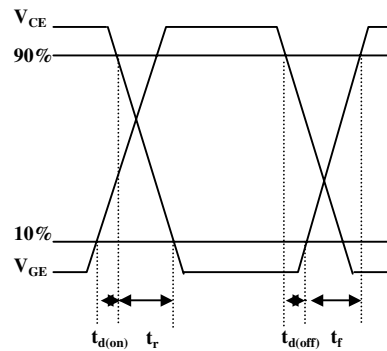


Fig 10. Switching Time Waveform

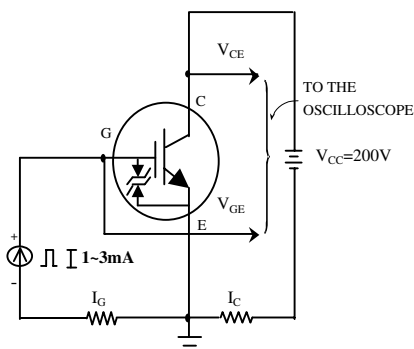


Fig 11. Gate Charge Test Circuit

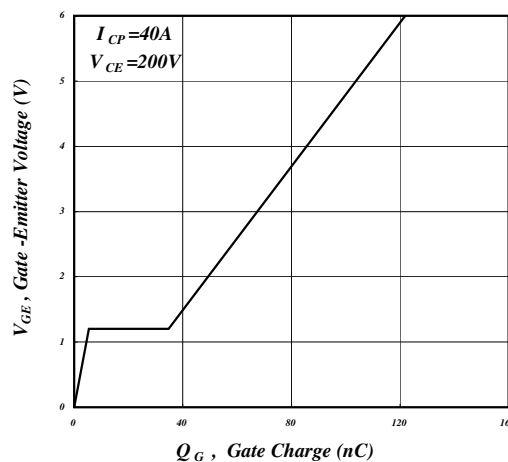
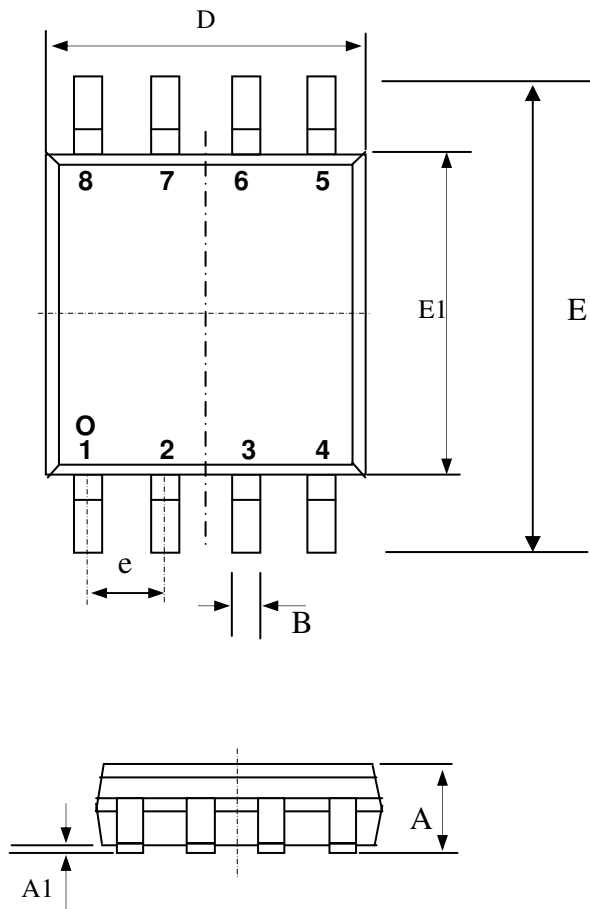


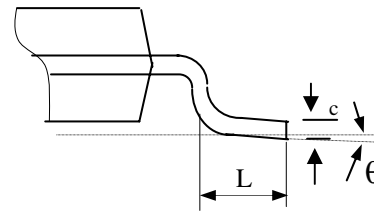
Fig 12. Gate Charge Waveform



Package Dimensions: TSSOP-8

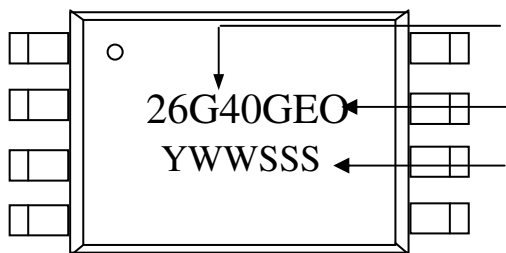


SYMBOLS	Millimeters		
	MIN	NOM	MAX
A	---	---	1.20
A1	0.05	---	0.15
B	0.19	---	0.30
C	---	0.127	----
D	2.90	3.00	3.10
E	6.20	6.40	6.60
E1	4.30	4.40	4.50
L	0.45	0.60	0.75
e	0.65 REF.		
θ	0°	----	8°



1. All dimensions are in millimeters.
2. Dimensions do not include mold protrusions.

Marking Information:



Product: AP26G40

GEO = RoHS-compliant TSSOP-8
with Gate ESD protection

YWWSSS = Date/lot code

YWW = Year and work week of manufacture.

SSS = Lot code information.