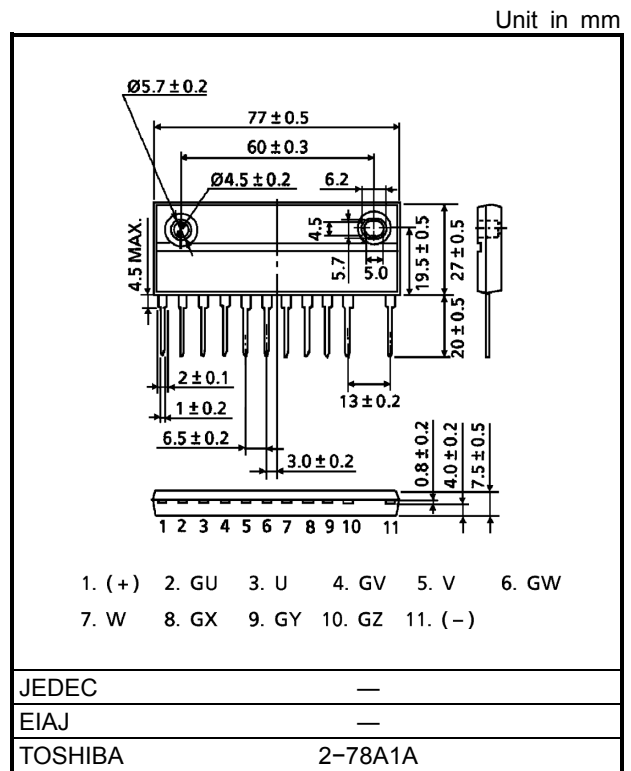


MP6752

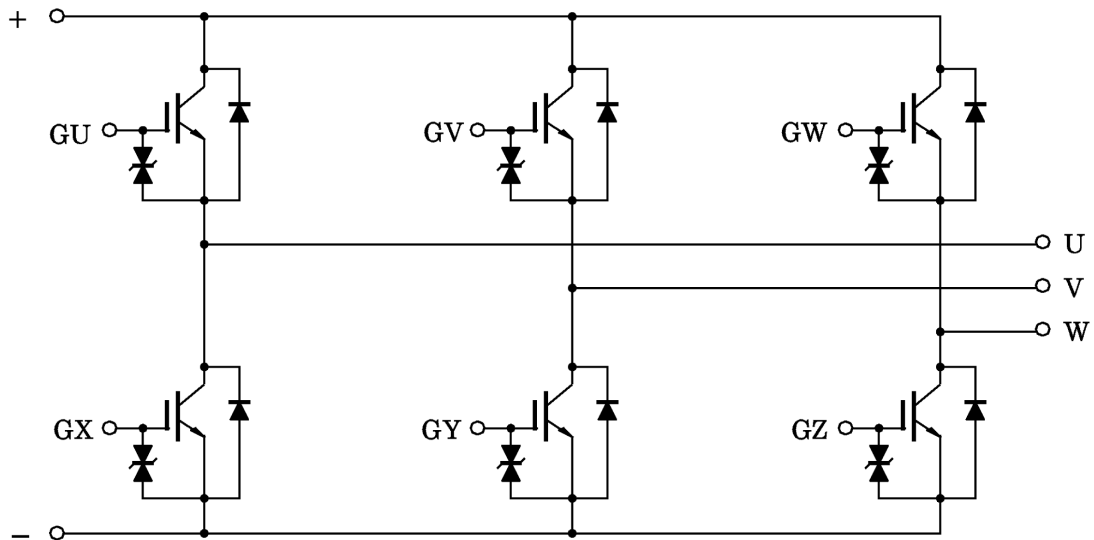
High Power Switching Applications
 Motor Control Applications

- The electrodes are isolated from case.
- 6 IGBTs are built into 1 package.
- Enhancement-mode
- Low saturation voltage
 : $V_{CE(sat)} = 4.0V$ (max.) ($I_C = 20A$)
- High speed: $t_f = 0.35\mu s$ (max.) ($I_C = 20A$)
 $t_{rr} = 0.15\mu s$ (max.) ($I_F = 20A$)



Weight: 44g

Equivalent Circuit

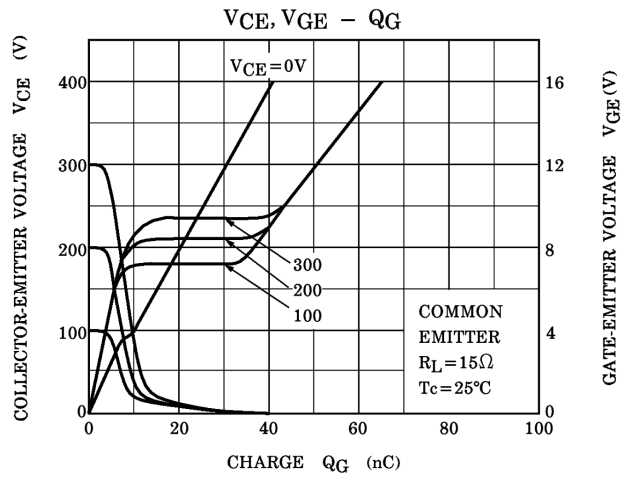
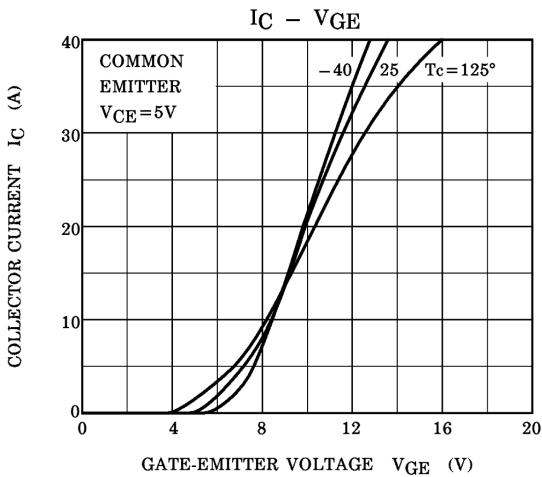
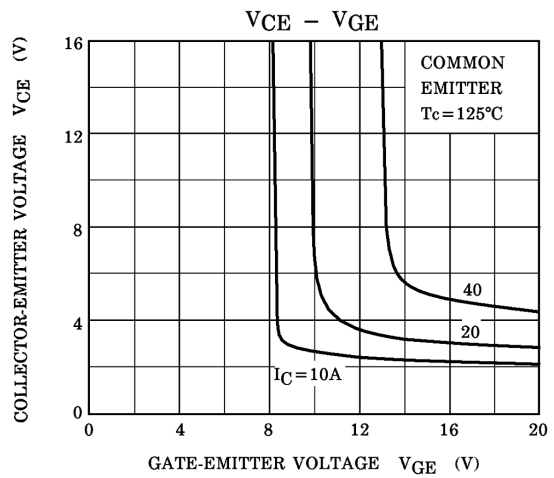
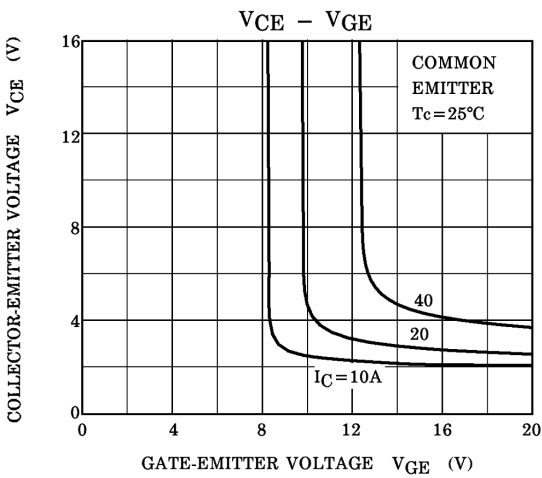
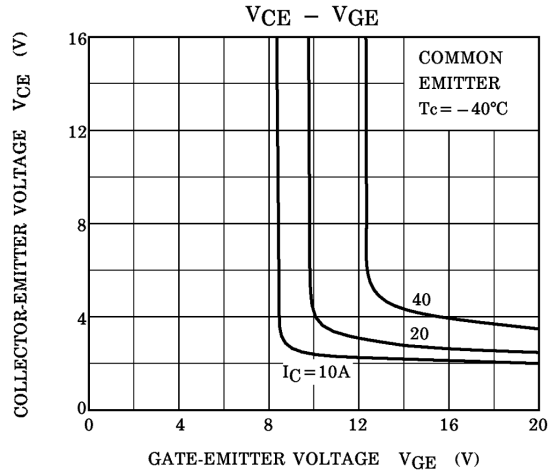
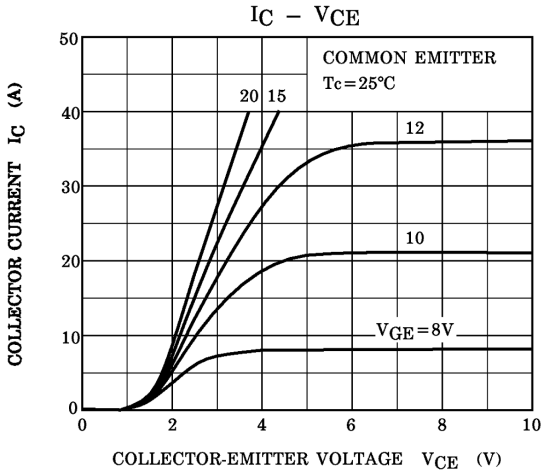


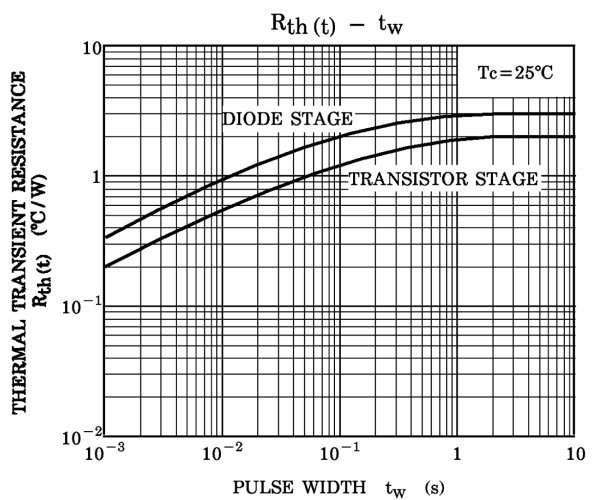
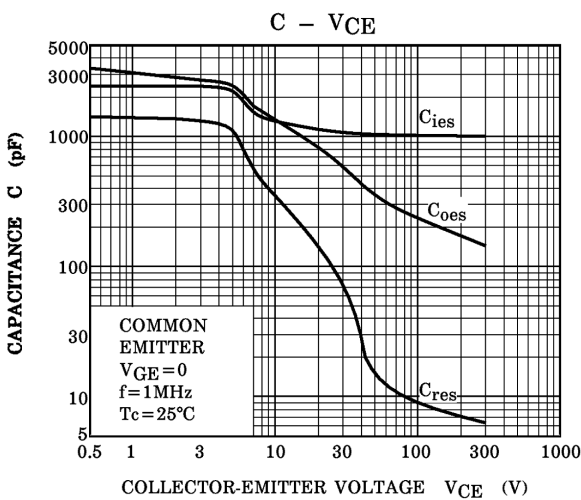
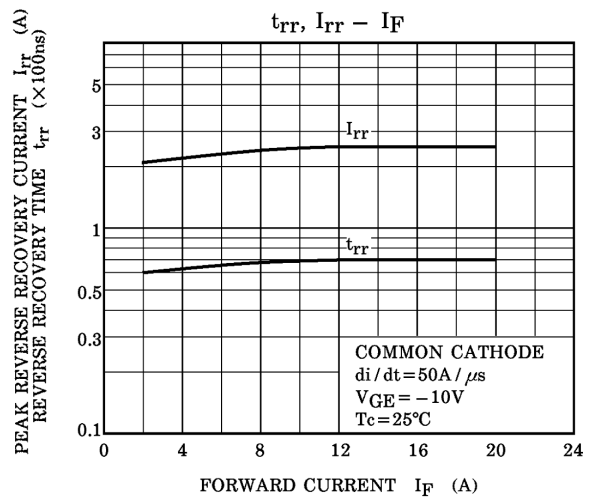
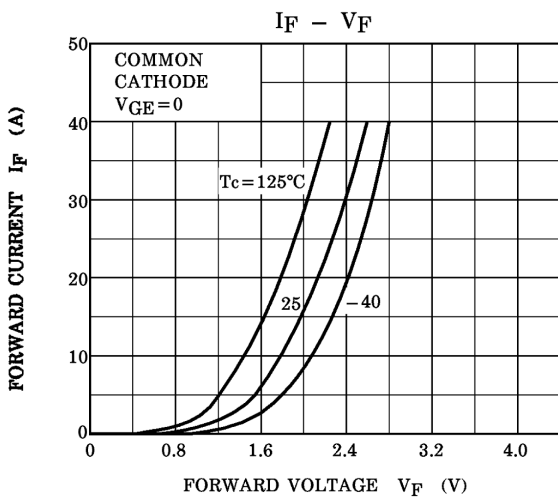
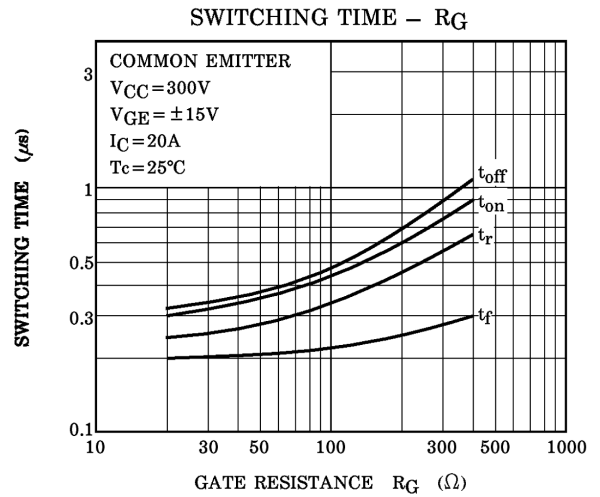
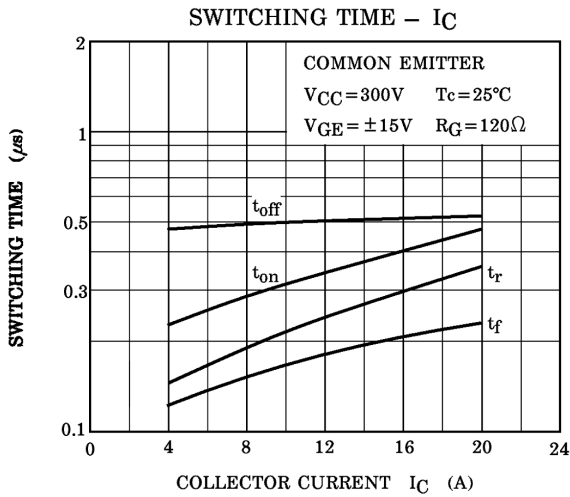
Maximum Ratings (Ta = 25°C)

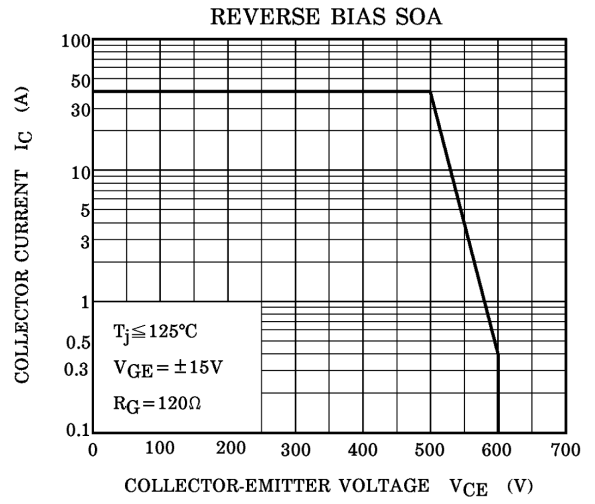
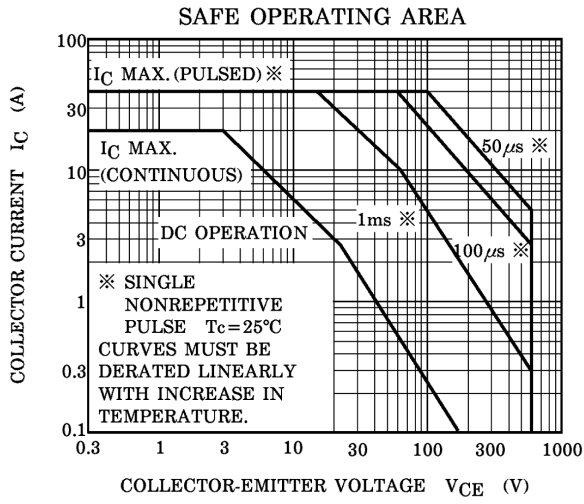
Characteristic		Symbol	Rating	Unit
Collector-emitter voltage		V_{CES}	600	V
Gate-emitter voltage		V_{GES}	±20	V
Collector current	DC	I_C	20	A
	1ms	I_{CP}	40	
Forward current	DC	I_F	20	A
	1ms	I_{FM}	40	
Collector power dissipation (Tc = 25°C)		P_C	60	W
Junction temperature		T_j	150	°C
Storage temperature range		T_{stg}	-40~125	°C
Isolation voltage		V_{isol}	2500 (AC 1 minute)	V
Screw torque		—	1.5	N·m

Electrical Characteristics (Ta = 25°C)

Characteristic		Symbol	Test Condition	Min.	Typ.	Max.	Unit
Gate leakage current		I_{GES}	$V_{GE} = \pm 20V, V_{CE} = 0$	—	—	±20	μA
Collector cut-off current		I_{CES}	$V_{CE} = 600V, V_{GE} = 0$	—	—	1.0	mA
Gate-emitter cut-off voltage		$V_{GE(off)}$	$I_C = 20mA, V_{CE} = 5V$	3.0	—	6.0	V
Collector-emitter saturation voltage		$V_{CE(sat)}$	$I_C = 20A, V_{GE} = 15V$	—	3.0	4.0	V
Input capacitance		C_{ies}	$V_{CE} = 10V, V_{GE} = 0,$ $f = 1MHz$	—	1300	—	pF
Switching time	Rise time	t_r		—	0.3	0.6	μs
	Turn-on time	t_{on}		—	0.4	0.8	
	Fall time	t_f		—	0.2	0.35	
	Turn-off time	t_{off}		—	0.5	1.0	
Forward voltage		V_F	$I_F = 20A, V_{GE} = 0$	—	1.7	2.5	V
Reverse recovery time		t_{rr}	$I_F = 20A, V_{GE} = -10V$ $di / dt = 50A / \mu s$	—	0.08	0.15	μs
Thermal resistance	$R_{th(j-c)}$	Transistor		—	—	2.08	°C / W
		Diode		—	—	3.09	







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