Unit: mm

TOSHIBA GTR Module Silicon N Channel IGBT

MP6750

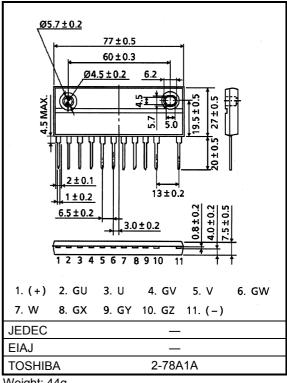
High Power Switching Applications Motor Control Applications

- The electrodes are isolated from case.
- 6 IGBTs are built into 1 package.
- Enhancement-mode
- Low saturation voltage

: VCE (sat) = 4.0V (Max) (IC = 15A)

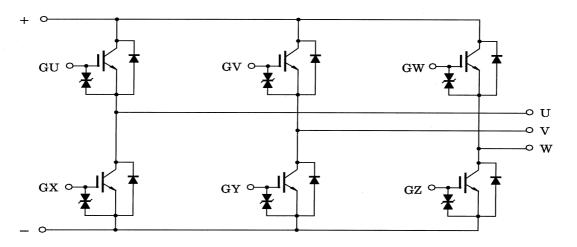
High speed: $t_f = 0.35\mu s$ (Max) (IC = 15A)

 $t_{rr} = 0.15 \mu s \text{ (Max) (IF} = 15 \text{A)}$



Weight: 44g

Equivalent Circuit



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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	15	Α	
	1ms	I _{CP}	30		
Forward current	DC	l _F	15	Α	
	1ms	I _{FM}	30		
Collector power dissipation (Tc = 25°C)		PC	55	W	
Junction temperature		Tj	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	Тур.	Max	Unit
Gate leakage current		I _{GES}	$V_{GE} = \pm 20V, V_{CE} = 0$	_	_	± 20	μΑ
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 = 15mA, V _{CE} = 5V	3.0	_	6.0	V
Collector-emitter saturation voltage		V _{CE} (sat)	I _C = 15A, V _{GE} = 15V	_	3.0	4.0	V
Input capacitance		C _{ies}	V _{CE} = 10V, V _{GE} = 0, f = 1MHz	_	1000	_	pF
Switching time	Rise time	t _r	15V 0 150Ω 150Ω 300V	_	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}	3001	_	0.5	1.0	
Forward voltage		V _F	I _F = 15A, V _{GE} = 0	_	1.7	2.5	V
Reverse recovery time		t _{rr}	I _F = 15A, V _{GE} = -10V di / dt = 50A / μs	_	0.08	0.15	μs
Thermal resistance		R _{th (j-c)}	Transistor	_	_	2.27	°C/W
			Diode	_	_	3.09	C/W

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