Unit: mm

TOSHIBA TRANSISTOR SILICON NPN TRIPLE DIFFUSED MESA TYPE

2SC5858

HORIZONTAL DEFLECTION OUTPUT FOR HDTV, DIGITAL TV, PROJECTION TV

• High Voltage : $V_{CBO} = 1700 \text{ V}$

 $\begin{array}{ll} \bullet & \text{Low Saturation Voltage} & : \text{V}_{CE} \text{ (sat)} = 1.5 \text{ V (Max)} \\ \bullet & \text{High Speed} & : \text{t}_{f(2)} = 0.1 \text{ } \mu \text{s} \text{ (Typ.)} \\ \end{array}$

ABSOLUTE MAXIMUM RATINGS (Tc = 25°C)

CHARACTERISTIC		SYMBOL	RATING	UNIT	
Collector-Base Voltage		V_{CBO}	1700	V	
Collector-Emitter Voltage		V _{CEO}	750	V	
Emitter-Base Voltage		V _{EBO}	5	٧	
Collector Current	DC	Ic	22	Α	
	Pulse	I _{CP}	44		
Base Current		ΙB	11	Α	
Collector Power Dissipation		PC	200	W	
Junction Temperature		Tj	150	°C	
Storage Temperature Range		T _{stg}	-55~150	°C	

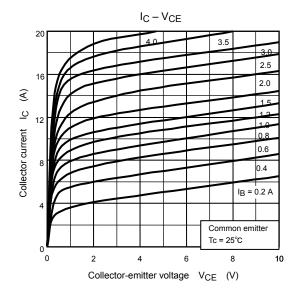
Note: Using continuously under heavy loads (e.g. the application of high temperature/current/voltage and the significant change in

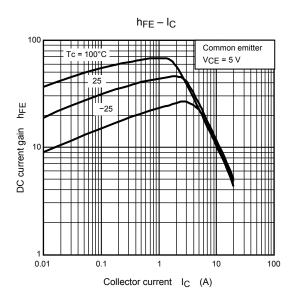
Weight: 9.75 g (typ.)

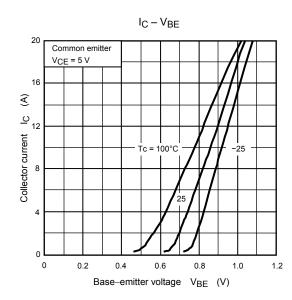
temperature, etc.) may cause this product to decrease in the reliability significantly even if the operating conditions (i.e. operating temperature/current/voltage, etc.) are within the absolute maximum ratings. Please design the appropriate reliability upon reviewing the Toshiba Semiconductor Reliability Handbook ("Handling Precautions"/Derating Concept and Methods) and individual reliability data (i.e. reliability test report and estimated failure rate, etc).

ELECTRICAL CHARACTERISTICS (Tc = 25°C)

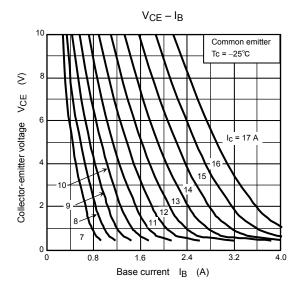
CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN	TYP.	MAX	UNIT
Collector Cut-off Current		I _{CBO}	V _{CB} = 1700 V, I _E = 0	_	_	1	mA
Emitter Cut-off Current		I _{EBO}	V _{EB} = 5 V, I _C = 0	_	_	100	μA
Collector - Emitter Breakdown Voltage		V (BR) CEO	I _C = 10 mA, I _B = 0	750	_	_	V
DC Current Gain		h _{FE (1)}	V _{CE} = 5 V, I _C = 2 A	30	_	60	_
		h _{FE (2)}	V _{CE} = 5 V, I _C = 8 A	11	_	19	
		h _{FE (3)}	V _{CE} = 5 V, I _C = 17 A	5	_	7.5	
Collector-Emitter Saturation Voltage		V _{CE} (sat)	I _C = 17 A, I _B = 4.25 A	_	_	1.5	V
Base-Emitter Saturation Voltage		V _{BE} (sat)	I _C = 17 A, I _B = 4.25 A	_	1.0	1.5	V
Transition Frequency		f _T	V _{CE} = 10 V, I _C = 0.1 A	_	2	_	MHz
Collector Output Capacitance		C _{ob}	V _{CB} = 10 V, I _E = 0, f = 1 MHz	_	280	_	pF
Switching Time	Storage Time	t _{stg(1)}	I _{CP} = 9 A , I _{B1} (end) = 1.4 A	_	4.5	_	μs
	Fall Time	t _{f(1)}	f _H = 32 kHz	_	0.1	_	
	Storage Time	t _{stg(2)}	I _{CP} = 8 A, I _{B1} (end) = 1.2 A	_	3.5	_	- μs
	Fall Time	t _{f(2)}	f _H = 45 kHz	_	0.1	_	

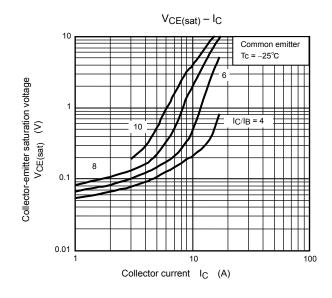


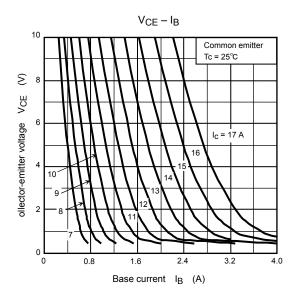


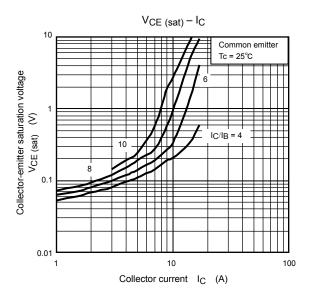


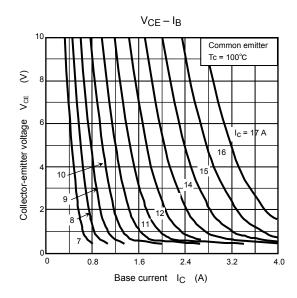
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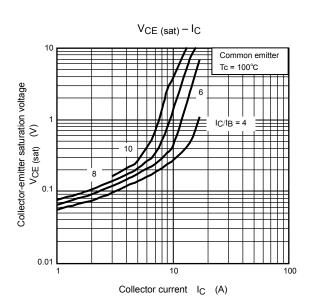


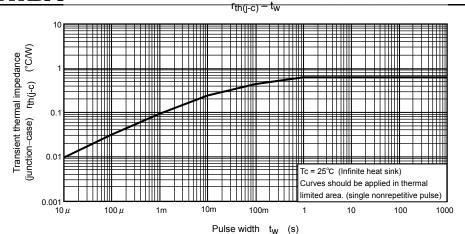


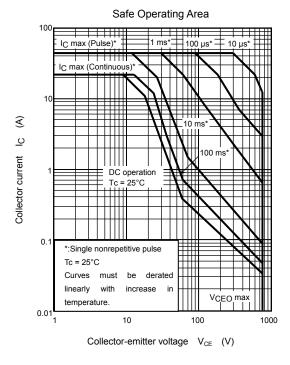


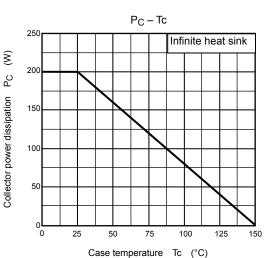


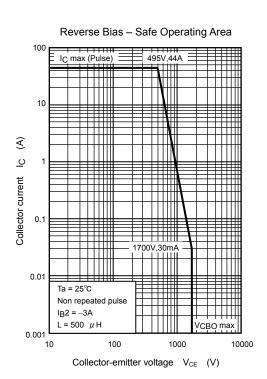












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