

TOSHIBA TRANSISTOR SILICON NPN TRIPLE DIFFUSED TYPE

2SC5439

SWITCHING REGULATOR APPLICATIONS

HIGH VOLTAGE SWITCHING APPLICATIONS

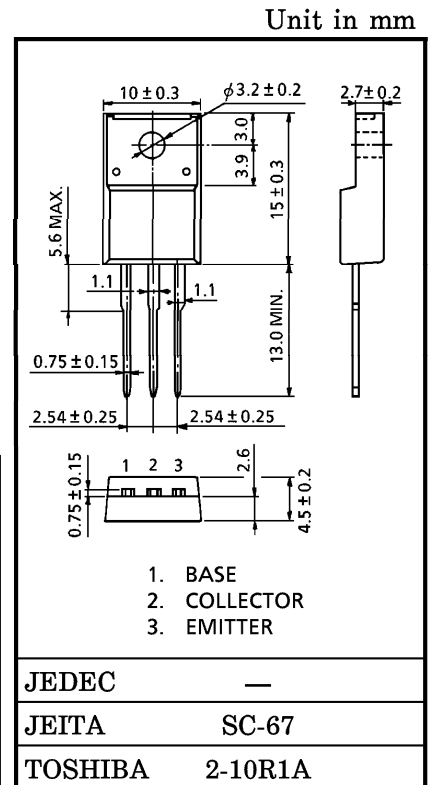
DC-DC CONVERTER APPLICATIONS

INVERTER LIGHTING APPLICATIONS

- Excellent Switching Times : $t_r = 0.2 \mu s$ (Typ.),
 $t_f = 0.15 \mu s$ (Typ.)
- High Collector Breakdown Voltage : $V_{CEO} = 450 V$

MAXIMUM RATINGS ($T_c = 25^\circ C$)

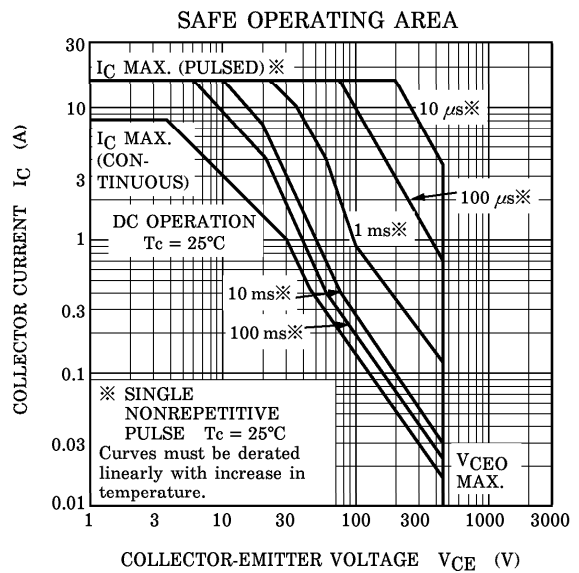
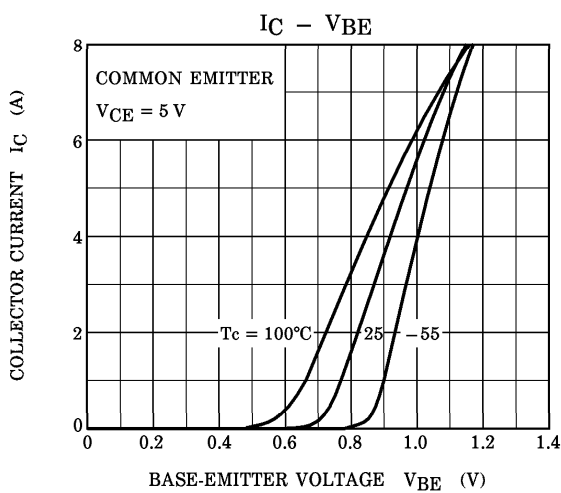
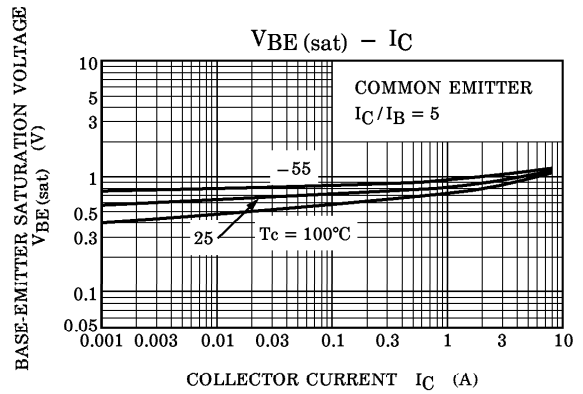
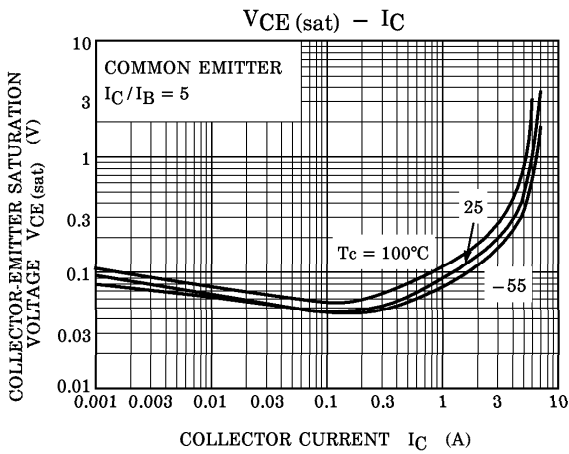
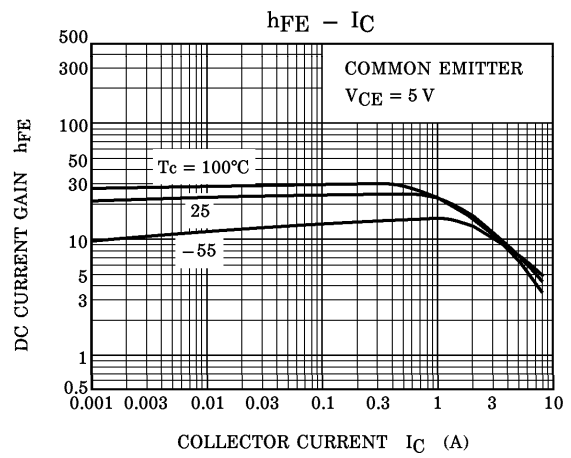
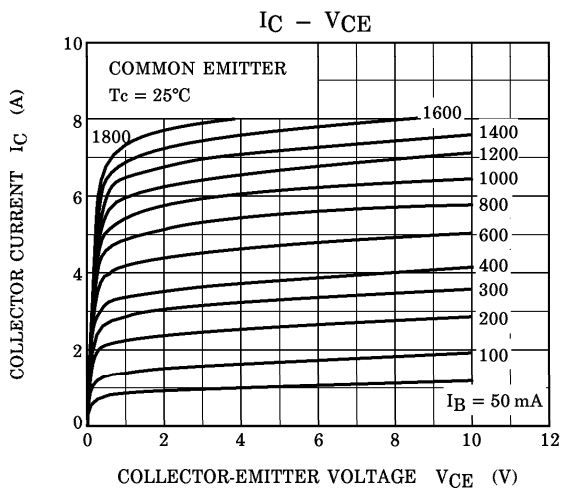
CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	1000	V
Collector-Emitter Voltage	V_{CEO}	450	V
Emitter-Base Voltage	V_{EBO}	9	V
Collector Current	DC	I_C	8
	Pulse	I_{CP}	16
Base Current	I_B	1	A
Collector Power Dissipation	PC	$T_a = 25^\circ C$	2.0
		$T_c = 25^\circ C$	30
Junction Temperature	T_j	150	$^\circ C$
Storage Temperature Range	T_{stg}	-55~150	$^\circ C$



Weight : 1.7 g (Typ.)

ELECTRICAL CHARACTERISTICS ($T_c = 25^\circ C$)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT	
Collector Cut-off Current	I_{CBO}	$V_{CB} = 1000 V, I_E = 0$	—	—	100	μA	
Emitter Cut-off Current	I_{EBO}	$V_{EB} = 7 V, I_C = 0$	—	—	10	μA	
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = 1 mA, I_E = 0$	1000	—	—	V	
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = 10 mA, I_B = 0$	450	—	—	V	
DC Current Gain	$h_{FE}(1)$	$V_{CE} = 5 V, I_C = 1 mA$	10	—	—		
	$h_{FE}(2)$	$V_{CE} = 5 V, I_C = 1 A$	14	—	34		
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 3.2 A, I_B = 0.64 A$	—	—	1.0	V	
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = 3.2 A, I_B = 0.64 A$	—	—	1.5	V	
Switching Time	Turn-on Time	t_{on}			—	0.2	—
	Storage Time	t_{stg}	—	2.0	3.5	μs	
	Fall Time	t_f	$I_{B1} = 0.64 A, I_{B2} = -1.28 A$ DUTY CYCLE $\leq 1\%$	—	0.15	—	



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