TOSHIBA TRANSISTOR SILICON PNP EPITAXIAL TYPE (PCT PROCESS)

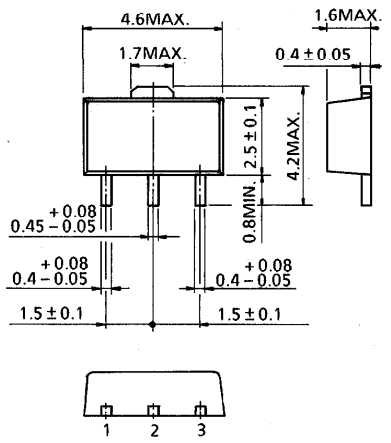
2SA1736

POWER AMPLIFIER APPLICATIONS

POWER SWITCHING APPLICATIONS

- Low Saturation Voltage: $V_{CE\ (sat)} = -0.5V$ (Max.) ($I_C = -1.5A$)
- High Speed Switching : $t_{stg} = 0.2\mu s$ (Typ.)
- Small Flat Package
- $P_C = 1 \sim 2W$ (Mounted on Ceramic Substrate)
- Complementary to 2SC4541

Unit in mm



1. BASE
2. COLLECTOR (HEAT SINK)
3. EMITTER

PW-MINI	
JEDEC	—
JEITA	SC-62
TOSHIBA	2-5K1A

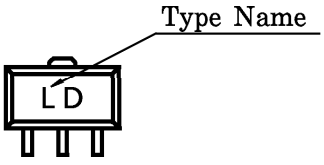
Weight : 0.05g (Typ.)

MAXIMUM RATINGS (Ta = 25°C)

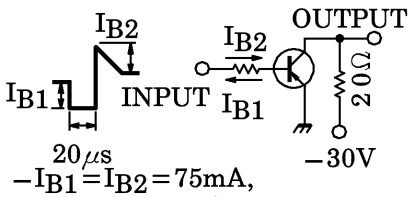
CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	−60	V
Collector-Emitter Voltage	V_{CEO}	−50	V
Emitter-Base Voltage	V_{EBO}	−6	V
Collector Current	I_C	−3	A
Base Current	I_B	−0.6	A
Collector Power Dissipation	P_C	500	mW
Collector Power Dissipation	P_C*	1000	mW
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	−55~150	°C

* : Mounted on ceramic substrate ($250mm^2 \times 0.8t$)

MARKING



ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		I_{CBO}	$V_{CB} = -60V$, $I_E = 0$	—	—	−0.1	μA
Emitter Cut-off Current		I_{EBO}	$V_{EB} = -6V$, $I_C = 0$	—	—	−0.1	μA
Collector-Emitter Breakdown Voltage		$V_{(BR)CEO}$	$I_C = -10mA$, $I_E = 0$	−50	—	—	V
DC Current Gain		$h_{FE(1)}$	$V_{CE} = -2V$, $I_C = -100mA$	120	—	400	
		$h_{FE(2)}$	$V_{CE} = -2V$, $I_C = -2A$	40	—	—	
Collector-Emitter Saturation Voltage		$V_{CE(sat)}$	$I_C = -1.5A$, $I_B = -75mA$	—	—	−0.5	V
Base-Emitter Saturation Voltage		$V_{BE(sat)}$	$I_C = -1.5A$, $I_B = -75mA$	—	—	−1.2	V
Transition Frequency		f_T	$V_{CE} = -2V$, $I_C = -100mA$	—	100	—	MHz
Collector Output Capacitance		C_{ob}	$V_{CB} = -10V$, $I_E = 0$, f = 1MHz	—	32	—	pF
Switching Time	Turn-on Time	t_{on}	 $-I_{B1} = I_{B2} = 75mA$, DUTY CYCLE ≦ 1%	—	0.1	—	μs
	Storage Time	t_{stg}		—	0.2	—	
	Fall Time	t_f		—	0.1	—	

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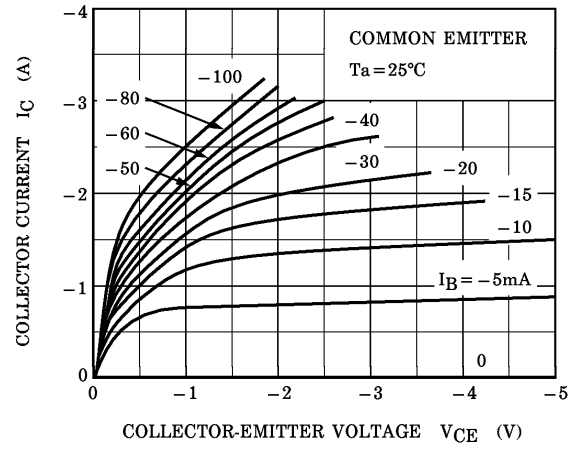
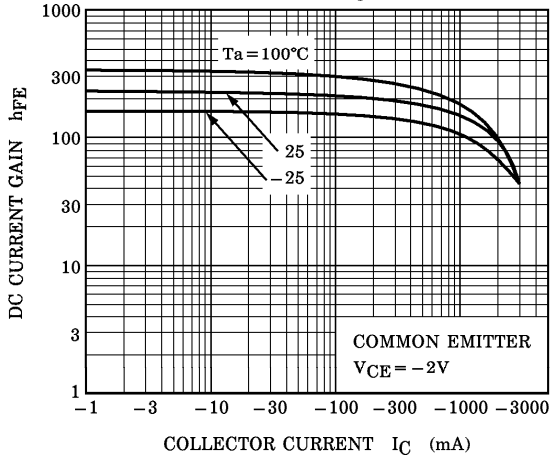
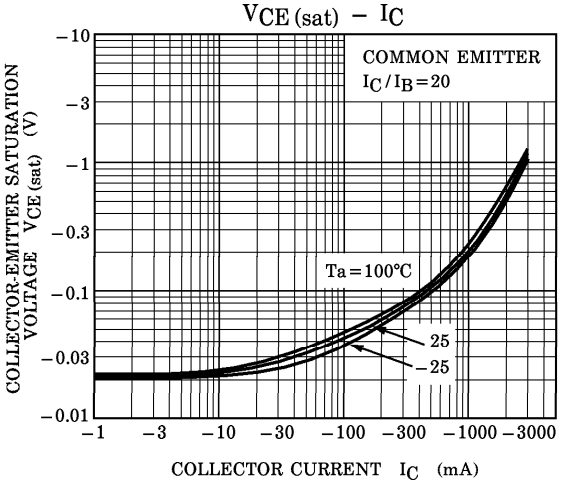
$I_C - V_{CE}$



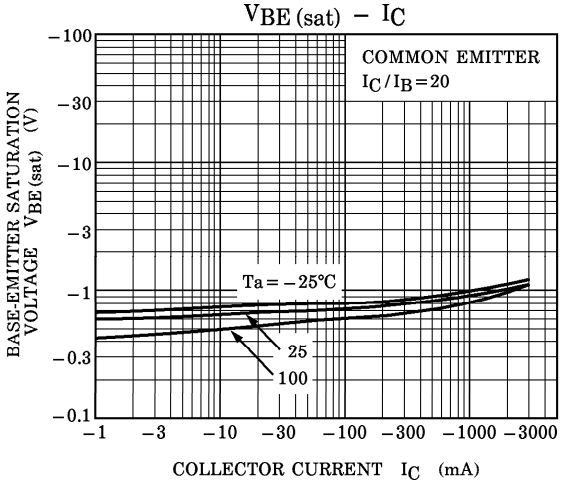
$h_{FE} - I_C$



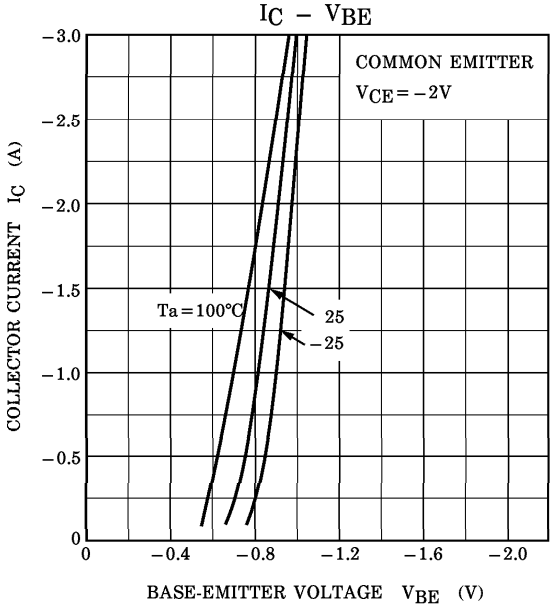
$V_{CE\,(sat)} - I_C$



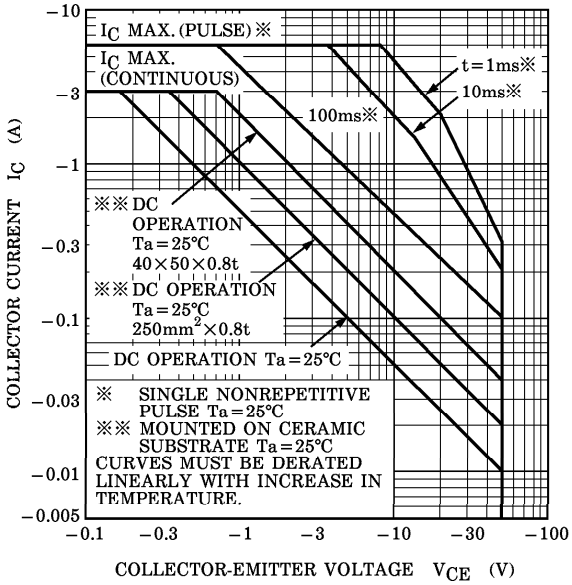
$V_{BE\,(sat)} - I_C$



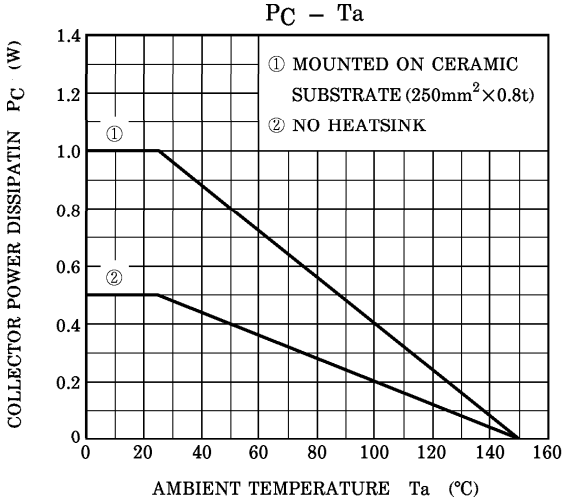
I_C – V_{BE}



SAFE OPERATING AREA



P_C – Ta



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