

TOSHIBA Transistor Silicon PNP Epitaxial Type (PCT process)

2SA1735

Power Amplifier Applications  
Power Switching Applications

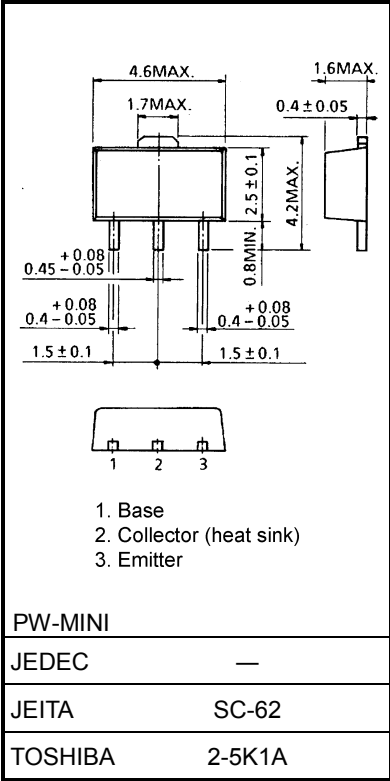
- Low saturation voltage:  $V_{CE(sat)} = -0.5\text{ V (max)}$  ( $I_C = -500\text{ mA}$ )
- High speed switching time:  $t_{stg} = 0.25\text{ }\mu\text{s (typ.)}$
- Small flat package
- $P_C = 1.0\text{ to }2.0\text{ W}$  (mounted on ceramic substrate)
- Complementary to 2SC4540

Maximum Ratings (Ta = 25°C)

Characteristics	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	$I_C$	-1	A
Base current	$I_B$	-0.2	A
Collector power dissipation	$P_C$	500	mW
	$P_C$ (Note)	1000	
Junction temperature	$T_j$	150	°C
Storage temperature range	$T_{stg}$	-55 to 150	°C

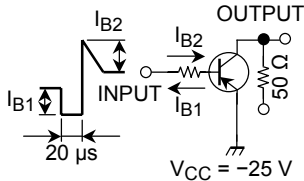
Note: Mounted on ceramic substrate (250 mm<sup>2</sup> × 0.8 t)

Unit: mm

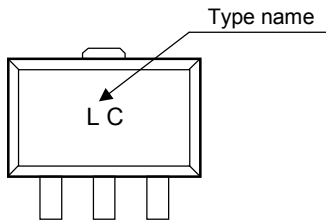


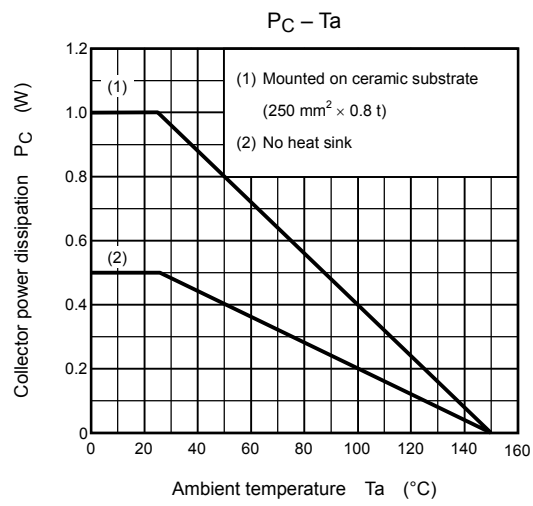
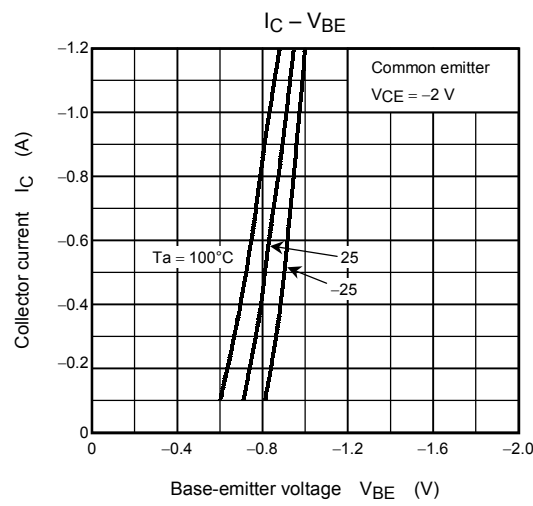
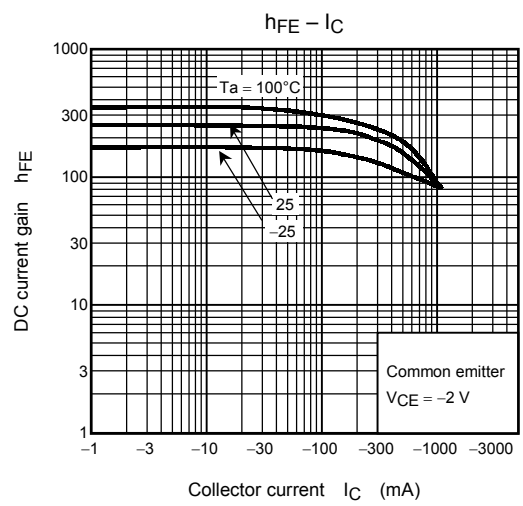
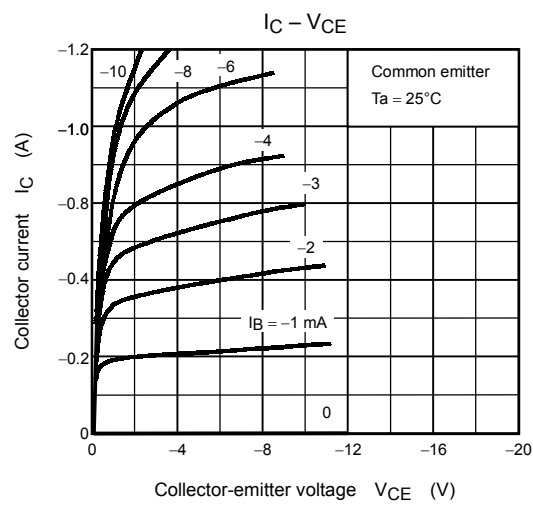
Weight: 0.05 g (typ.)

Electrical Characteristics (Ta = 25°C)

Characteristics		Symbol	Test Condition	Min	Typ.	Max	Unit
Collector cut-off current		$I_{CBO}$	$V_{CB} = -60\text{ V}, I_E = 0$	—	—	-0.1	$\mu\text{A}$
Emitter cut-off current		$I_{EBO}$	$V_{EB} = -6\text{ V}, I_C = 0$	—	—	-0.1	$\mu\text{A}$
Collector-emitter breakdown voltage		$V_{(BR)CEO}$	$I_C = -10\text{ mA}, I_B = 0$	-50	—	—	V
DC current gain		$h_{FE(1)}$	$V_{CE} = -2\text{ V}, I_C = -100\text{ mA}$	120	—	400	
		$h_{FE(2)}$	$V_{CE} = -2\text{ V}, I_C = -700\text{ mA}$	40	—	—	
Collector-emitter saturation voltage		$V_{CE(sat)}$	$I_C = -500\text{ mA}, I_B = -25\text{ mA}$	—	—	-0.5	V
Base-emitter saturation voltage		$V_{BE(sat)}$	$I_C = -500\text{ mA}, I_B = -25\text{ mA}$	—	—	-1.2	V
Transition frequency		$f_T$	$V_{CE} = -2\text{ V}, I_C = -100\text{ mA}$	—	100	—	MHz
Collector output capacitance		$C_{ob}$	$V_{CB} = -10\text{ V}, I_E = 0, f = 1\text{ MHz}$	—	16	—	pF
Switching time	Turn-on time	$t_{on}$	 $-I_{B1} = I_{B2} = 25\text{ mA},$ $\text{DUTY CYCLE} \leq 1\%$	—	0.1	—	$\mu\text{s}$
	Storage time	$t_{stg}$		—	0.25	—	
	Fall time	$t_f$		—	0.1	—	

Marking





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