

TOSHIBA TRANSISTOR SILICON PNP EPITAXIAL TYPE (PCT PROCESS)

2SA1734

POWER AMPLIFIER APPLICATIONS

POWER SWITCHING APPLICATIONS

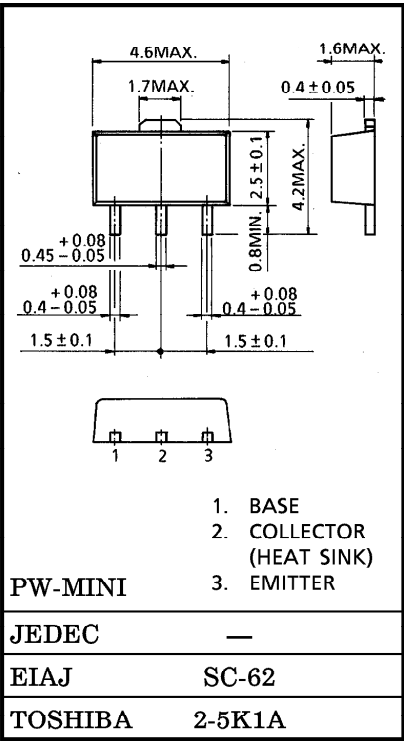
- Low Saturation Voltage :  $V_{CE(sat)} = -0.5V (Max.)$   
( $I_C = -700mA$ )
- High Speed Switching Time:  $t_{stg} = 0.2\mu s (Typ.)$
- Small Flat Package
- $P_C = 1\sim 2W$  (Mounted on Ceramic Substrate)
- Complementary to 2SC4539

MAXIMUM RATINGS ( $T_a = 25^{\circ}C$ )

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	$V_{CBO}$	-40	V
Collector-Emitter Voltage	$V_{CEO}$	-30	V
Emitter-Base Voltage	$V_{EBO}$	-6	V
Collector Current	$I_C$	-1.2	A
Base Current	$I_B$	-0.3	A
Collector Power Dissipation	$P_C$	500	mW
Collector Power Dissipation	$P_C^*$	1000	mW
Junction Temperature	$T_j$	150	$^{\circ}C$
Storage Temperature Range	$T_{stg}$	-55~150	$^{\circ}C$

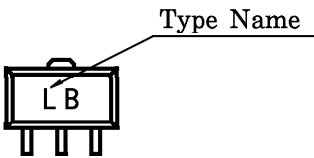
\* : Mounted on ceramic substrate (250mm<sup>2</sup>×0.8t)

Unit in mm



Weight : 0.05g

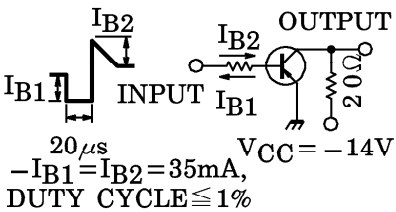
Marking



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ELECTRICAL CHARACTERISTICS ( $T_a = 25^\circ\text{C}$ )

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		$I_{CBO}$	$V_{CB} = -40\text{V}, I_E = 0$	—	—	-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	
		$h_{FE(2)}$	$V_{CE} = -2\text{V}, I_C = -1.0\text{A}$	40	—	—	
Collector-Emitter Saturation Voltage		$V_{CE(sat)}$	$I_C = -700\text{mA}, I_B = -35\text{mA}$	—	—	-0.5	V
Base-Emitter Saturation Voltage		$V_{BE(sat)}$	$I_C = -700\text{mA}, I_B = -35\text{mA}$	—	—	-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	$t_{on}$	 <p> <math>I_{B2}</math>  <math>I_{B1}</math>  <math>20\mu\text{s}</math>  <math>-I_{B1} = I_{B2} = 35\text{mA}</math>  <math>DUTY\ CYCLE \leq 1\%</math>  <math>V_{CC} = -14\text{V}</math> </p>	—	0.1	—	$\mu\text{s}$
	Storage Time	$t_{stg}$		—	0.2	—	
	Fall Time	$t_f$		—	0.1	—	

