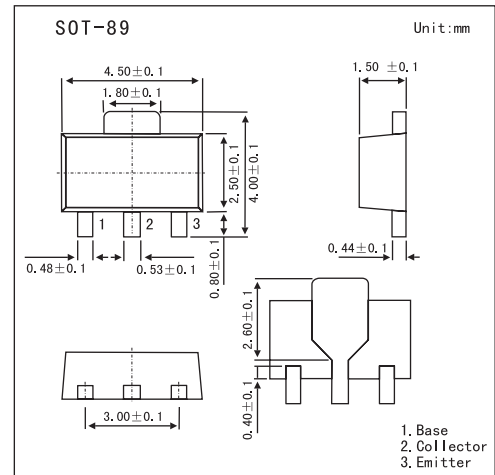


## Power Switching Applications

## 2SA1735

## ■ Features

- Low Saturation Voltage:  $V_{CE(sat)} = -0.5V$  (max) ( $I_C = -500mA$ )
- High Speed Switching Time:  $t_{stg} = 0.25\mu s$  (typ.)
- Small Flat Package
- $P_C = 1$  to  $2W$  (mounted on ceramic substrate)
- Complementary to 2SC4540

■ Absolute Maximum Ratings  $T_a = 25^\circ C$ 

Parameter	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
	$P_C^*$	1000	
Junction temperature	$T_j$	150	$^\circ C$
Storage temperature Range	$T_{stg}$	-55 to +150	$^\circ C$

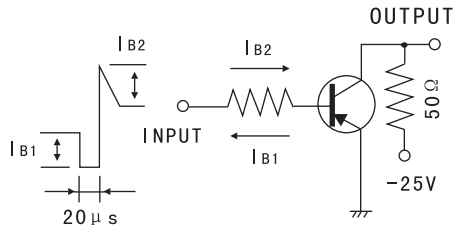
\* Mounted on ceramic substrate ( $250\text{ mm}^2 \times 0.8\text{ t}$ )

■ Electrical Characteristics  $T_a = 25^\circ C$ 

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector Cut-off Current	$I_{CBO}$	$V_{CB} = -60V, I_E = 0$			-0.1	$\mu A$
Emitter Cut-off Current	$I_{EBO}$	$V_{EB} = -6V, I_C = 0$			-0.1	$\mu A$
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = -10mA, I_B = 0$	-50			V
DC Current Gain	$h_{FE}$	$V_{CE} = -2V, I_C = -100mA$	120		400	
		$V_{CE} = -2V, I_C = -700mA$	40			
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = -500mA, I_B = -25mA$			-0.5	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = -500mA, I_B = -25mA$			-1.2	V
Transition Frequency	$f_T$	$V_{CE} = -2V, I_C = -100mA$		100		MHz
Collector Output Capacitance	$C_{ob}$	$V_{CB} = -10V, I_E = 0, f = 1MHz$		16		pF
Turn-On Time	$t_{on}$	See Test Circuit.		0.1		$\mu s$
Storage Time	$t_{stg}$			0.25		
Fall Time	$t_f$			0.1		

# 2SA1735

## Test Circuit



$-I_{B1} = I_{B2} = 25\text{mA}$  , DUTY CYCLE  $\leq 1\%$

## Marking

Marking	LC
---------	----

## Electrical Characteristics Curves

