

TOSHIBA TRANSISTOR SILICON NPN EPITAXIAL TYPE (PCT PROCESS)

# 2SC4118

AUDIO FREQUENCY LOW POWER AMPLIFIER APPLICATIONS

DRIVER STAGE AMPLIFIER APPLICATIONS

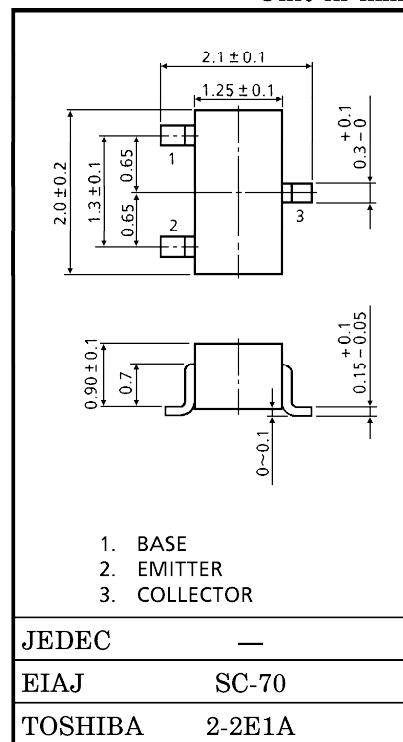
SWITCHING APPLICATIONS

- Excellent  $h_{FE}$  Linearity :  $h_{FE}(2) = 25$  (Min.)  
( $V_{CE} = 6V, I_C = 400mA$ )
- Complementary to 2SA1588

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

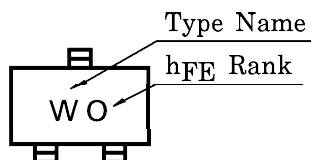
CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	$V_{CB0}$	35	V
Collector-Emitter Voltage	$V_{CE0}$	30	V
Emitter-Base Voltage	$V_{EB0}$	5	V
Collector Current	$I_C$	500	mA
Base Current	$I_B$	50	mA
Collector Power Dissipation	$P_C$	100	mW
Junction Temperature	$T_j$	125	$^\circ C$
Storage Temperature Range	$T_{stg}$	-55~125	$^\circ C$

Unit in mm



Weight : 0.006g

MARKING



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## ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	$I_{CBO}$	$V_{CB} = 35V, I_E = 0$	—	—	0.1	$\mu A$
Emitter Cut-off Current	$I_{EBO}$	$V_{EB} = 5V, I_C = 0$	—	—	0.1	$\mu A$
DC Current Gain	$h_{FE} (1)$ (Note)	$V_{CE} = 1V, I_C = 100mA$	70	—	240	
	$h_{FE} (2)$ (Note)	$V_{CE} = 6V, I_C = 400mA$	25	—	—	
Collector-Emitter Saturation Voltage	$V_{CE} (sat)$	$I_C = 100mA, I_B = 10mA$	—	0.1	0.25	V
Base-Emitter Voltage	$V_{BE}$	$V_{CE} = 1V, I_C = 100mA$	—	0.8	1.0	V
Transition Frequency	$f_T$	$V_{CE} = 6V, I_C = 20mA$	—	300	—	MHz
Collector Output Capacitance	$C_{ob}$	$V_{CB} = 6V, I_E = 0, f = 1MHz$	—	7	—	pF

(Note) :  $h_{FE} (1)$  Classification    O : 70~140,    Y : 120~240  
 $h_{FE} (2)$  Classification    O : 25 (Min.),    Y : 40 (Min.)

