TOSHIBA TRANSISTOR SILICON PNP EPITAXIAL TYPE (PCT PROCESS)

2 S A 1 6 2 0

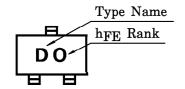
AUDIO FREQUENCY AMPLIFIER APPLICATIONS

• Complementary to 2SC4209

MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	v_{CBO}	-80	V
Collector-Emitter Voltage	v_{CEO}	-80	V
Emitter-Base Voltage	$V_{ m EBO}$	-5	V
Collector Current	$I_{\mathbf{C}}$	-300	mA
Base Current	$I_{\mathbf{B}}$	-60	mA
Collector Power Dissipation	$P_{\mathbf{C}}$	200	mW
Junction Temperature	T_{j}	150	°C
Storage Temperature Range	$\mathrm{T_{stg}}$	-55~150	°C

Marking



Unit in mm

2.5-0.3 +0.25 +0.25 1.5-0.15 2.5-0.3 3 1				
1. BASE				
2. EMITTER 3. COLLECTOR S-MINI				
JEDEC TO-236MOD				
EIAJ SC-59				

2-3F1A

Weight: 0.012g

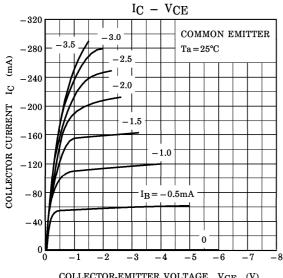
TOSHIBA

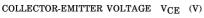
ELECTRICAL CHARACTERISTICS (Ta = 25°C)

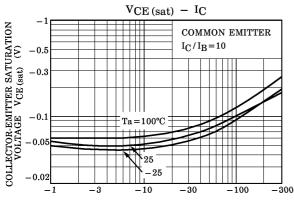
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I _{CBO}	$V_{CB} = -50V, I_{E} = 0$	_	_	-0.1	μ A
Emitter Cut-off Current	I_{EBO}	$V_{EB} = -5V, I_C = 0$	_	_	-0.1	μ A
Collector-Emitter Breakdown Voltage	V (BR) CEO	$I_{\rm C} = -5 {\rm mA}, \ I_{\rm B} = 0$	-80	_	_	V
DC Current Gain	h _{FE (1)} (Note)	$V_{CE} = -2V, I_{C} = -50 \text{mA}$	70	_	240	
	h _{FE} (2)	$V_{CE} = -2V, I_{C} = -200 \text{mA}$	40	_	_	
Collector-Emitter Saturation Voltage	V _{CE} (sat)	$I_C = -200 \text{mA}, I_B = -20 \text{mA}$	_	_	-0.4	V
Base-Emitter Voltage	$ m V_{BE}$	$V_{CE} = -2V, I_{C} = -5mA$	-0.55	_	-0.8	V
Transition Frequency	${ m f_T}$	$V_{CE} = -10V, I_{C} = -10mA$	70	100	_	MHz
Collector Output Capacitance	C _{ob}	$V_{CB} = -10V, I_E = 0, f = 1MHz$	_	14	_	pF

Note: hFE Classification, O: 70~140, Y: 120~240

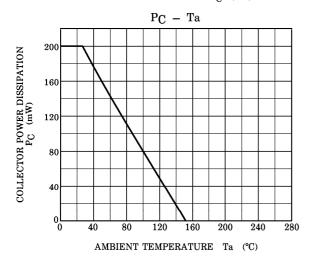
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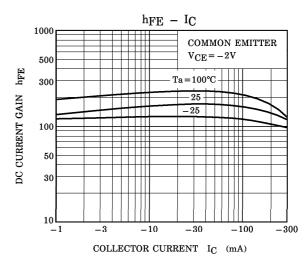


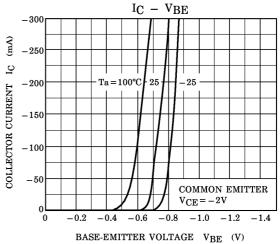




COLLECTOR CURRENT IC (mA)







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