

NPN SILICON EPITAXIAL DUAL TRANSISTOR FOR DIFFERENTIAL AMPLIFIER INDUSTRIAL USE

DESCRIPTION

The 2SC1733 is an NPN silicon epitaxial dual transistor designed for use in high-frequency differential amplifier applications. Two transistor chips equivalent to the 2SC1275 are housed in a package the same size as TO-18.

FEATURES

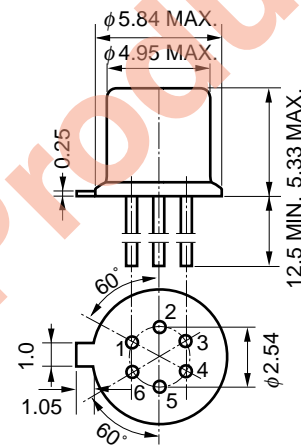
High gain bandwidth product: $f_T = 2$ GHz TYP.

Compact package, the same size as TO-18

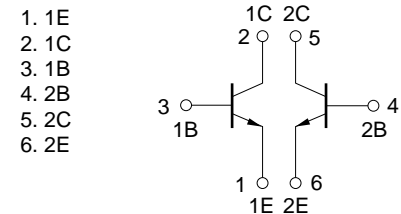
ABSOLUTE MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$)

PARAMETER	SYMBOL	RATINGS	UNIT
Collector to Base Voltage	V_{CBO}	30	V
Collector to Emitter Voltage	V_{CEO}	14	V
Emitter to Base Voltage	V_{EBO}	3.0	V
Collector Current	I_C	50	mA
Collector Dissipation	P_C	200	mW/unit
Total Power Dissipation	P_T	300	mW
Junction Temperature	T_J	200	$^\circ\text{C}$
Storage Temperature	T_{stg}	-65 to +200	$^\circ\text{C}$

PACKAGE DIMENSIONS (in millimeters)



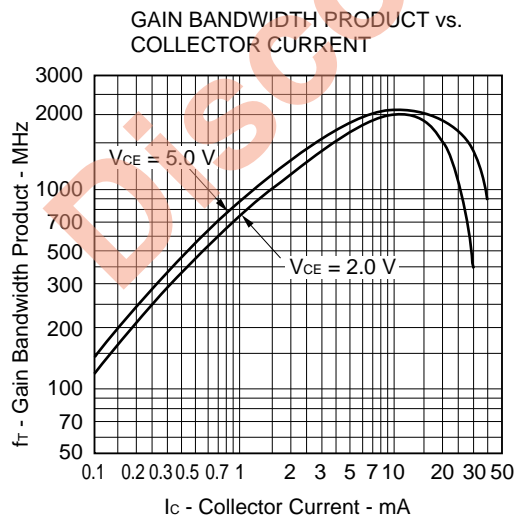
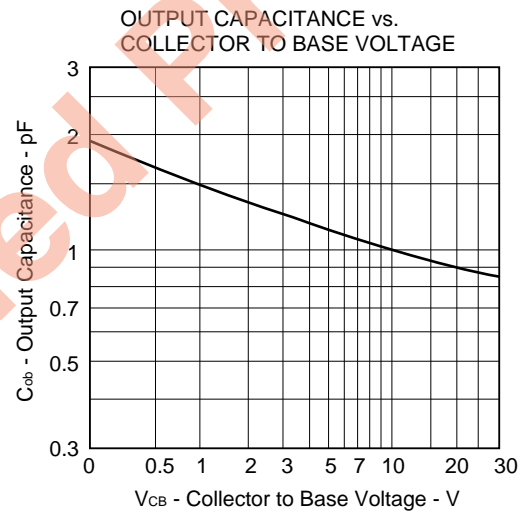
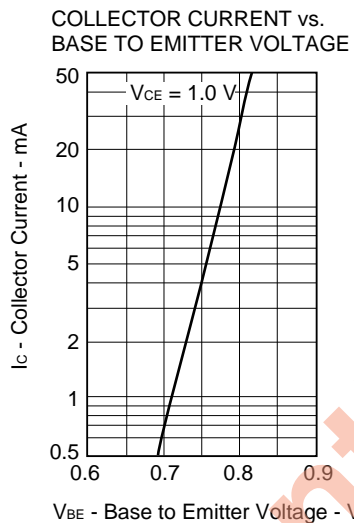
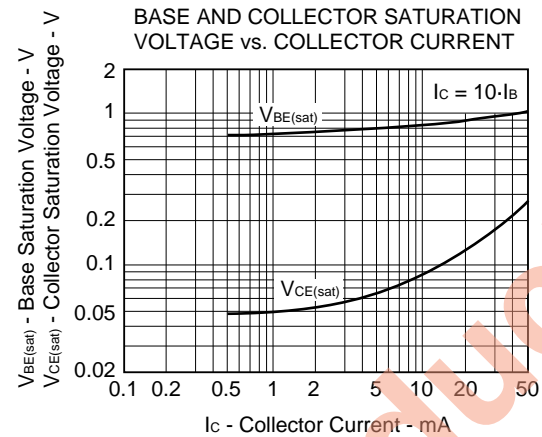
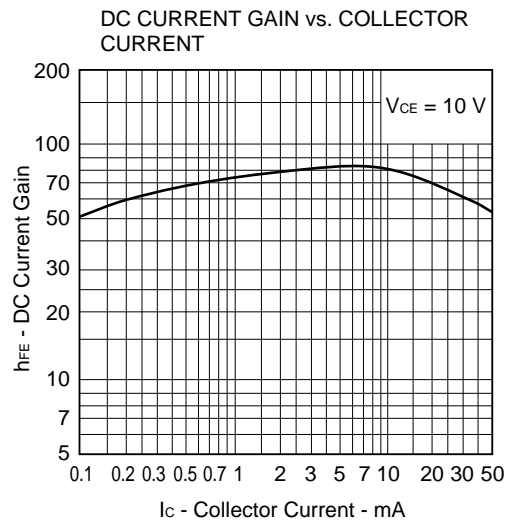
PIN CONNECTIONS



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

PARAMETER	SYMBOL	TEST CONDITIONS	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CES}	$V_{CE} = 15\text{ V}, R_{BE} = 0$			50	nA
Emitter Cut-off Current	I_{EBO}	$V_{EB} = 2.0\text{ V}, I_C = 0$			50	nA
DC Current Gain	h_{FE}	$V_{CE} = 10\text{ V}, I_C = 10\text{ mA}$	25	80	200	
h_{FE} Ratio	h_{FE1}/h_{FE2}	$V_{CE} = 10\text{ V}, I_C = 10\text{ mA}^*$	0.8		1.0	
Difference of Base to Emitter Voltage	ΔV_{BE}	$V_{CE} = 10\text{ V}, I_C = 10\text{ mA}$			30	mV
Gain Bandwidth Product	f_T	$V_{CE} = 10\text{ V}, I_C = 10\text{ mA}$	1.5	2.0		GHz
Output Capacitance	C_{ob}	$V_{CB} = 10\text{ V}, I_E = 0, f = 1.0\text{ MHz}$		1.1	1.5	pF

* h_{FE1} is the smaller h_{FE} value of the 2 transistors.

TYPICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$)

[MEMO]

Discontinued Product

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Anti-radioactive design is not implemented in this product.