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2N6725

Silicon NPN Darlington Transistor TO-237 Type Package

Description:

The 2N6725 is a silicon NPN Darlington power transistors designed for amplifier applications.

Absolute Maximum Ratings: ($T_A = +25^\circ\text{C}$ unless otherwise specified)

Collector-Base Voltage, V_{CBO}	60V
Collector-Emitter Voltage, V_{CEO}	50V
Emitter-Base Voltage, V_{EBO}	12V
Continuous Collector Current, I_C	2A
Continuous Base Current, I_B	0.5A
Power Dissipation, P_D	
$T_C = +25^\circ\text{C}$	2W
Operating Junction Temperature Range, T_J	-65° to $+150^\circ\text{C}$
Storage Temperature Range, T_{stg}	-65° to $+150^\circ\text{C}$
Thermal Resistance, Junction-to-Case, R_{thJC}	62.5°C/W

Electrical Characteristics: ($T_A = +25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = 1\mu\text{A}$, $I_E = 0$	60	–	–	V
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = 1\text{mA}$, $I_B = 0$ (Note 1)	50	–	–	V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = 10\mu\text{A}$, $I_C = 0$	10	–	–	V
Collector Cutoff Current	I_{CBO}	$V_{CB} = 30\text{V}$, $I_E = 0$	–	–	1.0	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = 8\text{V}$, $I_C = 0$	–	–	0.1	μA
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 200\text{mA}$, $I_B = 2\text{mA}$ (Note 1)	–	–	1.0	V
		$I_C = 1\text{A}$, $I_B = 2\text{mA}$ (Note 1)	–	–	1.5	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = 1\text{A}$, $I_B = 2\text{mA}$ (Note 1)	–	–	2.0	V
Base-Emitter Turn-On Voltage	$V_{BE(on)}$	$I_C = 1\text{A}$, $V_{CE} = 5\text{V}^*$ (Note 1)	–	–	2.0	V
Static Forward Current Transfer Ratio	h_{FE}	$I_C = 200\text{mA}$, $V_{CE} = 5\text{V}^*$ (Note 1)	25k	–	–	
		$I_C = 500\text{mA}$, $V_{CE} = 5\text{V}^*$ (Note 1)	15k	–	–	
		$I_C = 1\text{A}$, $V_{CE} = 5\text{V}^*$ (Note 1)	4k	–	40k	
Collector Base Capacitance	C_{CB}	$V_{CB} = 10\text{V}$, $f = 1\text{MHz}$	–	–	10	pF

Note 1. Measured under pulsed conditions. Pulse width=300 μs . Duty cycle $\leq 2\%$

