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2N6714

Silicon NPN Transistor

General Purpose Power Amp, Switch

TO-237 Type Package

Description:

The 2N6714 is a silicon NPN power transistors in a TO-237 type package designed for general purpose power amplifier and switching applications.

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

Collector-Base Voltage, V_{CBO}	40V
Collector-Emitter Voltage, V_{CEO}	30V
Emitter-Base Voltage, V_{EBO}	5V
Continuous Collector Current, I_C	2A
Continuous Base Current, I_B	500mA
Power Dissipation, P_D	
$T_A = +25^\circ\text{C}$	1W
$T_C = +25^\circ\text{C}$	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-Ambient, R_{thJA}	125°C/W
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	$V_{(BR)CBO}$	$I_C = 1\text{mA}$	40	-	-	V
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = 10\text{mA}$	30	-	-	V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = 1\text{mA}$	5	-	-	V
Collector Cutoff Current	I_{CBO}	$V_{CB} = 40\text{V}$	-	-	0.1	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = 5\text{V}$	-	-	0.1	μA
DC Current Gain	h_{FE}	$V_{CE} = 1\text{V}, I_C = 100\text{mA}$	60	-	-	
		$V_{CE} = 1\text{V}, I_C = 1\text{A}$	50	-	250	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 1\text{A}, I_B = 100\text{mA}$	-	-	0.5	V
Base-Emitter ON Voltage	$V_{BE(on)}$	$I_C = 1\text{A}, V_{CE} = 1\text{V}$	-	-	1.2	V
Transition Frequency	f_T	$V_{CE} = 10\text{V}, I_C = 50\text{mA}, f = 20\text{MHz}$	50	-	500	MHz
Output Capacitance	C_{ob}	$V_{CB} = 10\text{V}, I_E = 0, f = 1\text{MHz}$	-	-	30	pF

