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2N6728 & 2N6730
Silicon PNP Transistor
General Purpose Power Amp, Switch
TO-237 Type Package

Description:

The 2N6728 and 2N6730 are 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}

2N6728	60V
2N6730	100V

Collector–Emitter Voltage, V_{CEO}

2N6728	60V
2N6730	100V

Emitter–Base Voltage, V_{EBO}

.....	5V
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Continuous Collector Current, I_C	2A
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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°C

Storage Temperature Range, T_{stg}

-65° to +150°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 2N6728	$V_{(BR)CBO}$	$I_C = 0.1\text{mA}$	60	-	-	V
2N6730			100	-	-	V
Collector–Emitter Breakdown Voltage 2N6728	$V_{(BR)CEO}$	$I_C = 1\text{mA}$	60	-	-	V
2N6730			100	-	-	V
Emitter–Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = 0.1\text{mA}$	5	-	-	V
Collector Cutoff Current	I_{CBO}	$V_{CB} = \text{Rated } V_{CBO}$	-	-	0.1	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = \text{Rated } V_{EBO}$	-	-	10	μA

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

Parameter	Symbol	Condition	Min	Typ	Max	Unit
DC Current Gain	h_{FE}	$V_{CE} = 1\text{V}, I_C = 50\text{mA}$	80	—	—	
		$V_{CE} = 1\text{V}, I_C = 250\text{mA}$	50	—	250	
Collector-Emitter Saturation Voltage	$V_{CE(\text{sat})}$	$I_C = 250\text{mA}, I_B = 10\text{mA}$	—	—	0.5	V
Base-Emitter ON Voltage	$V_{BE(\text{on})}$	$I_C = 250\text{mA}, V_{CE} = 1\text{V}$	—	—	1.2	V
Transition Frequency	f_T	$V_{CE} = 5\text{V}, I_C = 200\text{mA}, f = 20\text{MHz}$	50	—	500	MHz
Output Capacitance	C_{ob}	$V_{CB} = 10\text{V}, I_E = 0, f = 1\text{MHz}$	—	—	30	pF

