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## NTE2689 Silicon NPN Transistor Audio Power Amp SOT-23 Type Package

**Description:**

The NTE2689 is a silicon NPN transistor in an SOT-23 surface mount type package designed for use in audio power amplifier applications.

**Features:**

- High DC Current Gain

**Absolute Maximum Ratings:**

Collector-Base Voltage, $V_{CBO}$	35V
Collector-Emitter Voltage, $V_{CEO}$	30V
Emitter-Base Voltage, $V_{EBO}$	5V
Collector Current, $I_C$	800mA
Collector Dissipation (Note 1), $P_C$	350mW
Operating Junction Temperature, $T_J$	+150°C
Storage Temperature Range, $T_{stg}$	-55° to +150°C

Note 1. Package mounted on 99.5% alumina 10 x 8 x 0.6mm.

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector-Base Breakdown Voltage	$BV_{CBO}$	$I_C = 100^\circ\text{A}, I_E = 0$	35	-	-	V
Collector-Emitter Breakdown Voltage	$BV_{CEO}$	$I_C = 1\text{mA}, I_B = 0$	30	-	-	V
Emitter-Base Breakdown Voltage	$BV_{EBO}$	$I_E = 10^\circ\text{A}, I_C = 0$	5	-	-	V
Collector Cut-Off Current	$I_{CBO}$	$V_{CB} = 35\text{V}, I_E = 0$	-	-	0.1	°A
Emitter Cut-Off Current	$I_{EBO}$	$V_{EB} = 5\text{V}, I_C = 0$	-	-	0.1	°A
DC Current Gain	$h_{FE}$	$V_{CE} = 1\text{V}, I_C = 100\text{mA}$	160	-	320	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 500\text{mA}, I_B = 50\text{mA}$	-	-	0.5	V
Transition Frequency	$f_T$	$V_{CE} = 5\text{V}, I_C = 10\text{mA}$	-	120	-	MHz
Collector Output Capacitance	$C_{ob}$	$V_{CB} = 10\text{V}, I_E = 0, f = 1\text{MHz}$	-	13	-	pF

