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NTE236
Silicon NPN Transistor
Final RF Power Output
($P_O = 16W, 27MHz, SSB$)
TO220AB

Description:

The NTE236 is a silicon NPN transistor in a TO220AB type package designed for 10–14 watt output power class AB amplifier applications in the HF band.

Features:

- High Power Gain: $G_{pe} \geq 12dB, P_O = 16W, f = 27MHz$
- High Reliability

Application:

- 10 to 14 Watt Output Power Class AB Amplifier Applications in the HF band

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

Collector–Base Voltage, V_{CBO}	60V
Collector–Emitter Voltage ($R_{BE} = \infty$), V_{CEO}	25V
Emitter–Base Voltage, V_{EBO}	5V
Collector Current, I_C	6A
Collector Dissipation, P_C	
$T_A = 25^\circ C$	1.7W
$T_C = 25^\circ C$	20W
Operating Junction Temperature, T_J	+150°C
Storage Temperature Range, T_{stg}	-55° to +150°C
Thermal Resistance, Junction–to–Ambient, R_{thJA}	73.5°C/W
Thermal Resistance, Junction–to–Case, R_{thJC}	6.25°C/W

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = 5\text{mA}, I_C = 0$	5	-	-	V
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = 1\text{mA}, I_E = 0$	60	-	-	V
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = 10\text{mA}, R_{BE} = \infty$	25	-	-	V
Collector Cutoff Current	I_{CBO}	$V_{CB} = 30\text{V}, I_E = 0$	-	-	0.1	mA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = 4\text{V}, I_C = 0$	-	-	0.1	mA
DC Forward Current Gain	h_{FE}	$V_{CE} = 12\text{V}, I_C = 10\text{mA}$	90	-	180	-
Output Power	P_O	$V_{CC} = 12\text{V}, P_{in} = 1\text{W}, f = 27\text{MHz}$	16	18	-	W
Collector Efficiency	h_C	$V_{CC} = 12\text{V}, P_{in} = 1\text{W}, f = 27\text{MHz}$	60	70	-	%

