

## 2N5178

Silicon NPN high power UHF transistor 2N5178 is designed for power amplifier, frequency multiplier or auto-oscillator applications in industrial equipment (class C).

Output Power: 40 Watt (typ)  
 Frequency Range: 100-500 Mhz  
 Voltage: 28 V  
 Package Type: FO-85  
 Common Emitter Configuration  
 Ballast Emitter Resistors  
 Aluminum Metalization

### Electrical Characteristics ( $T_{CASE}=40^{\circ}\text{C}$ )

SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
$P_{out}$	$f_o = 500 \text{ Mhz}/V_{cc}=28\text{V}/P_{IN}=20\text{W}$	35	40	50	W
$G_p$	$f_o = 500 \text{ Mhz}/V_{cc}=28\text{V}/P_{out}=40\text{W}$	3			dB
$\lambda_c$	$f_o = 500 \text{ Mhz}/V_{cc}=28\text{V}/P_{out}=20\text{W}$	45	55		%

### ABSOLUTE MAXIMUM RATINGS ( $T_{CASE} = 25^{\circ}\text{C}$ )

SYMBOL	PARAMETERS	VALUE	UNIT
$V_{CER}$	Collector-Emitter Voltage $R_{EB} \leq 10 \Omega$	60	V
$V_{EBO}$	Emitter-Base Voltage	3.5	V
$I_C$	Continuous Collector Current	2	A
$P_C$	Collector Power Dissipation	54*	W
$T_j$	Junction Temperature	160	$^{\circ}\text{C}$
$R_{th(j-c)}$	Junction-Case Thermal Resistance	2.5	$^{\circ}\text{C}/\text{W}$

\*For Dynamic Operation,  $T_{CASE} = 40^{\circ}\text{C}$