

**SGI**

**Silicon Group Inc.**

## **2N5177**

**Silicon NPN high power UHF transistor 2N5177 is designed for power amplifier, frequency multiplier or auto-oscillator applications in industrial equipment (class C).**

**\* Output power: 20 watt (typ)**  
**Frequency range: 100 - 500 MHz**  
**Voltage: 28 volt**  
**Package type: FO85**  
**Common Emitter Configuration**  
**Ballast Emitter Resistors**  
**Aluminum Metalization**

### **ELECTRICAL CHARACTERISTICS ( $T_{CASE} = 40^{\circ} C$ )**

SYMBOL	TEST CONDITIONS	VALUE			UNIT
		MIN.	TYP.	MAX.	
$P_{OUT}$	$f_o = 500 \text{ MHz} / V_{cc} = 28 \text{ V} / P_{IN} = 10 \text{ W}$	17	20	25	W
$G_p$	$f_o = 500 \text{ MHz} / V_{cc} = 28 \text{ V} / P_{OUT} = 20 \text{ W}$	3			dB
$\lambda_c$	$f_o = 500 \text{ MHz} / V_{cc} = 28 \text{ V} / P_{OUT} = 10 \text{ W}$	45	55		%

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

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	27*	W
$T_j$	Junction Temperature	160	$^{\circ}C$
$R_{th(j-c)}$	Junction-Case Thermal Resistance	5	$^{\circ}C/W$

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