

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
λ_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, $T_{CASE} = 40^{\circ}C$