

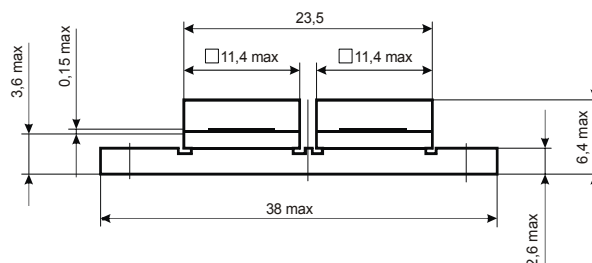
NPN SILICON RF POWER TRANSISTOR

2SC3812

The silicon n-p-n transistor is designed for Class AB Linearity Amplifier Applications in TV Band II-III Transmitters.

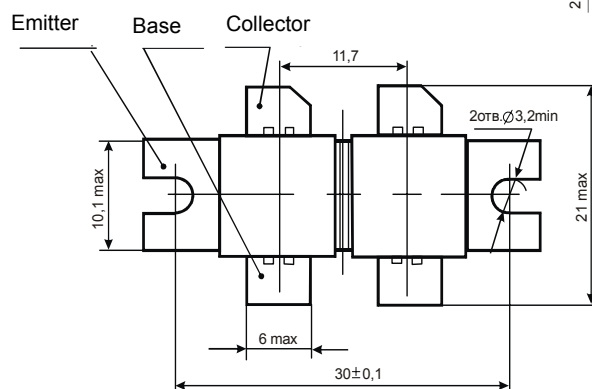
Features:

- Power Gain: 7 dB
- Output Power: 200 W
- Efficiency 50% (min)



Absolute Maximum Ratings

Parameters	Sym	Value	Unit
Collector-Emitter Voltage	V_{CEO}	32	V_{DC}
Collector-Base Voltage	V_{CBO}	55	V_{DC}
Collector Current	I_C	48	A_{DC}
Operation Junction Temperature	T_j	+200	$^{\circ}C$
Storage Temperature Range	T_{STG}	-55 ÷ +150	$^{\circ}C$
Thermal Resistance, Junction to Case	$R_{\theta JC}$	0.3	$^{\circ}C/W$
Total Power Dissipation, $T_C = 25^{\circ}C$	P_D	580	W



Parameters

Parameter	Symbol	Min.	Typ.	Max.	Unit
Collector-Emitter Breakdown Voltage ($I_C = 200$ mA, $V_{BE} = 0$ V)	$V_{(BR)CEO}$	32	—	—	V_{DC}
Collector-Base Breakdown Voltage ($I_C = 50$ mA)	$V_{(BR)CBO}$	55	—	—	V_{DC}
Emitter-Base Breakdown Voltage ($I_E = 10$ mA, $I_C = 0$ A)	$V_{(BR)EBO}$	4	—	—	V_{DC}
Collector-Base Leakage Current ($V_{CB} = 55$ V)	I_{CBO}	—	—	10	mA
DC Current Gain ($V_{CE} = 5$ V, $I_C = 3$ A)	h_{FE}	30	—	100	
Output Capacitance ($V_{CB} = 28$ V, $I_E = 0$ A, $f = 1$ MHz)	C_{OB}	—	300	500	pF
Output Power ($V_{CE} = 28$ V, $I_C = 2 \times 0.5$ A, $f = 230$ MHz, $P_{IN} = 45$ W)	P_{OUT}	158	200	—	W
Power Gain ($V_{CE} = 28$ V, $I_C = 2 \times 0.5$ A, $f = 230$ MHz)	G_p	7	8	—	dB
Collector Efficiency ($V_{CE} = 28$ V, $I_C = 2 \times 0.5$ A, $f = 230$ MHz, $P_{OUT} = 200$ W)	η	50	60	—	%

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Specification is subject to change without notice