

GENERAL DESCRIPTION

The S175-28 is a common emitter, high power device for linear HF applications. It is an extremely rugged device suitable for high power stages.

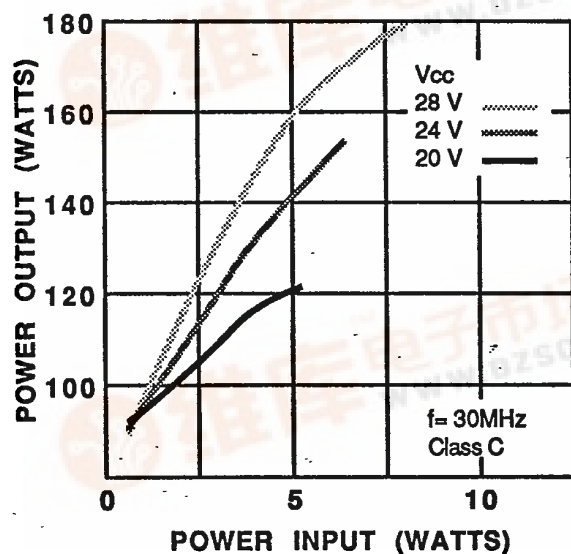
ABSOLUTE MAXIMUM RATINGS

Maximum Power Dissipation @ 25°C Case Temperature 320 W

Maximum Voltage and Current
BV_{ces} Collector to Emitter Voltage 60 V
BV_{ebo} Emitter to Base Voltage 3.5 V
I_c Collector Current 30 A

Maximum Temperatures
Storage Temperature -65 to +150°C
Operating Junction Temperature +200°C

POWER OUTPUT VS POWER INPUT

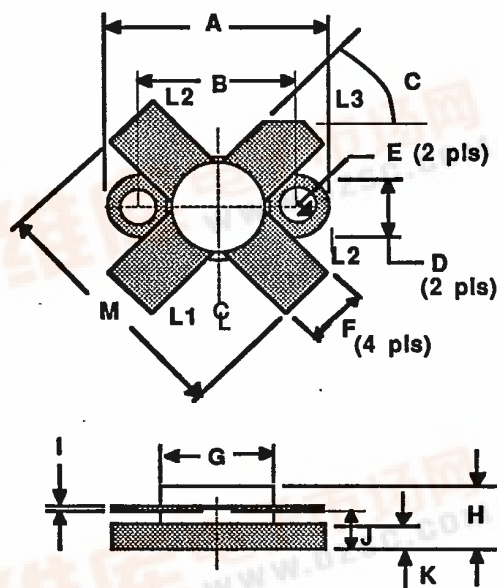


S175-28

175 WATTS - 28 VOLTS

1.5 - 30 MHz

HF COMMUNICATIONS

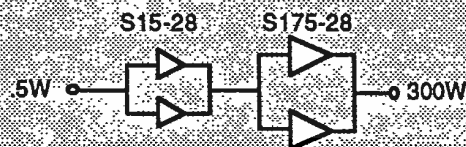


DIM	Millimeter	TOL	Inches	TOL
L1 : B				
L2 : E				
L3 : C				
A	24.76	.13	.975	.005
B	18.42	.13	.725	.005
C	45°	5°	45°	5°
D	6.35	.13	.250	.005
E	3.17 DIA	.13	.125 DIA	.005
F	5.71	.13	.225	.005
G	12.70 DIA	.13	.500 DIA	.005
H	6.65	REF	.262	REF
I	0.13	.02	.005	.001
J	4.24	.13	.167	.005
K	3.17	.13	.125	.005
M	28.90	.25	1.140	.010

TYPICAL AMPLIFIER LINE UP

V_{cc} = 28 Volts

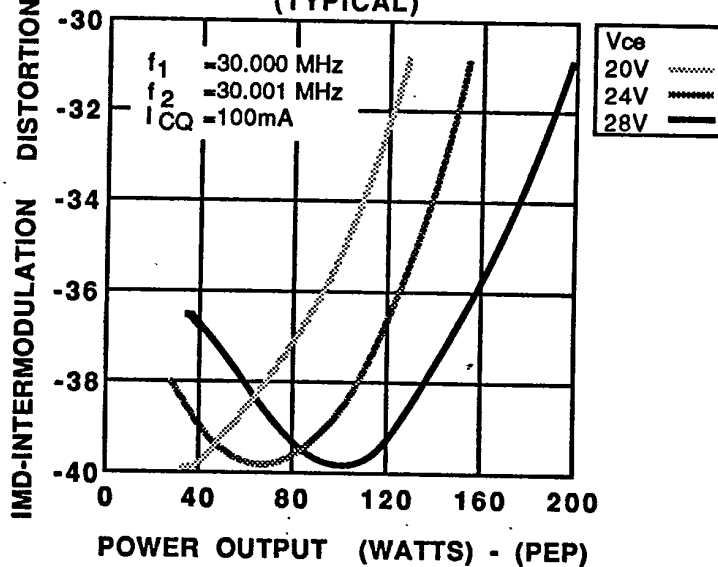
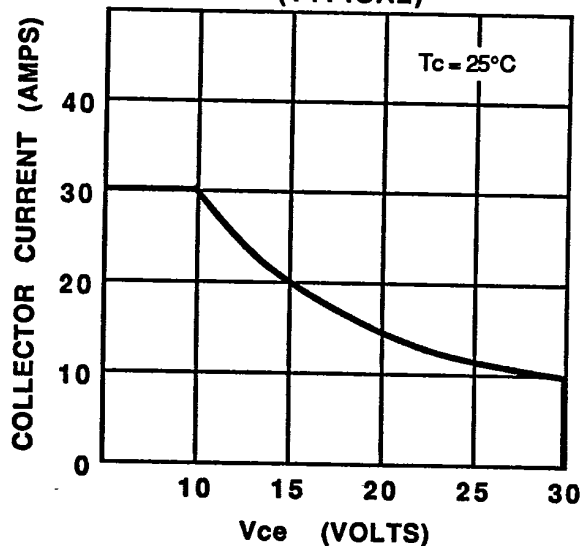
Frequency Range = 1.5-30 MHz



S175-28-2

ELECTRICAL CHARACTERISTICS

SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN.	TYP.	MAX.	UNITS
P _{out}	Power Output	f = 30 MHz, V _{cc} = 28V	175			Watts
P _{in}	Power Input	At Rated Power Out, V _{cc} = 28 V			7.0	Watts
P _g	Power Gain		14			dB
B _{Vebo}	Voltage - Emitter to Base	I _e = 10mA	3.5			Volts
B _{Vces}	Voltage - Collector to Emitter	I _c = 100mA	60			Volts
B _{Vceo}	Voltage - Collector to Emitter	I _c = 50mA	33			Volts
IMD	Intermodulation Distortion Level	P _{out} = 175W (PEP), V _{ce} = 28V f = 30 MHz			-32	dBc
VSWR	Load Mismatch Tolerance	f = 30 MHz, P _o = 175 W			30:1	
η_c	Collector Efficiency	At rated power out, V _{cc} = 28 V		65		%
h _{FE}	DC-Current Gain	V _{ce} = 5V, I _c = 1A	10			
θ_{jc}	Thermal Resistance	T _c = 25°C			.55	°C/W

INTERMODULATION DISTORTION
VS OUTPUT POWER
(TYPICAL)DC SAFE OPERATING AREA
(TYPICAL)

S175-28-3

