

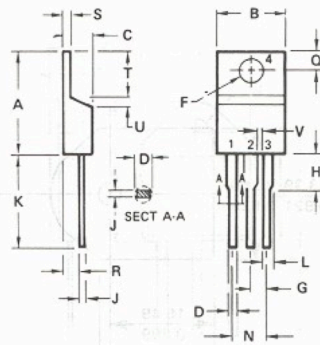
Description : the MRF342 IS a silicon NPN epitaxial planar transistor designed for RF power amplifiers on VHF band mobile radio applications .

The AMERICAN MICROSEMICONDUCTOR MRF342 is designed for VHF amplifier applications operating to 150 Mhz

MAXIMUM RATINGS

I_C	3.0 A
V_{CEO}	35 V
V_{CBO}	65 V
V_{EBO}	4.0 V
P_{DISS}	55 W @ $T_C = 25^\circ C$
T_J	-55 °C to +150 °C
T_{STG}	-55 °C to +150 °C
θ_{JC}	3.2 °C/W

PACKAGE STYLE TO-220AB



1 = Base 2 = Emitter 3 = Collector
 4 = Emitter

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	15.11	15.75	0.595	0.620
B	9.65	10.29	0.380	0.405
C	4.06	4.82	0.160	0.190
D	0.64	0.89	0.025	0.035
F	3.61	3.73	0.142	0.147
G	2.41	2.67	0.095	0.105
H	2.79	3.30	0.110	0.130
J	0.36	0.56	0.014	0.022
K	12.70	14.27	0.500	0.562
L	1.14	1.27	0.045	0.050
N	4.83	5.33	0.190	0.210
Q	2.54	3.04	0.100	0.120
R	2.04	2.79	0.080	0.110
S	1.14	1.39	0.045	0.055
T	5.97	6.48	0.235	0.255
U	0.76	1.27	0.030	0.050
V	1.14	-	0.045	-

CHARACTERISTICS $T_C = 25^\circ C$

SYMBOL	TEST CONDITIONS			MINIMUM	TYPICAL	MAXIMUM	UNITS
BV_{CEO}	$I_C = 20\text{ mA}$			35			V
BV_{CES}	$I_C = 20\text{ mA}$			65			V
BV_{CBO}	$I_C = 20\text{ mA}$			65			V
BV_{EBO}	$I_E = 2.0\text{ mA}$			4.0			V
I_{CES}	$V_{CE} = 27\text{ V}$					2.0	mA
h_{FE}	$V_{CE} = 5.0\text{ V}$	$I_C = 1.0\text{ A}$		10		100	---
C_{OB}	$V_{CB} = 27\text{ V}$	$f = 1.0$			20	30	pF
G_{PE}	$V_{CC} = 13.5\text{ V}$	$P_{OUT} = 6.0\text{ W}$	$f = 136$	10	11.5		dB
G_{PE}	$V_{CC} = 27\text{ V}$	$P_{OUT} = 24\text{ W}$	$f = 136$	11	12.3		dB
η_C	MHZ			50	60		%

***EMC GREEN molding compound is Halogen-Free.**
****For Lead Free plating, add suffix "LEAD FREE" to part number.**
For Tin/Lead plating, add suffix "TIN/LEAD" to part number.
No suffix designation allows for the supply of either lead-free or tin/lead plated product depending on availability.

Component	Material	Material		Substance	CAS No.	Substance		
		(%wt)	(mg)			(%wt)	(mg)	(ppm)
active device	doped Si	0.3%	5.67	Si	7440-21-3	0.3%	5.67	3,006
bond wire	aluminum	0.14%	2.55	Al	7429-90-5	0.14%	2.55	1,352
leadframe	Cu alloy	66.89%	1,261.9	Cu	7440-50-8	66.79%	1,260	667,944
				Fe	7439-89-6	0.003%	0.06	32
				P	7723-14-0	0.1%	1.8	954
die attach	high temperature solder	0.33%	6.21	Pb	7439-92-1	0.3%	5.74	3,043
				Sn	7440-31-5	0.02%	0.31	164
				Ag	7440-22-4	0.01%	0.16	82
encapsulation*	EMC	31.81%	600	silica	7631-86-9	23.22%	438	232,190
				epoxy resin	Proprietary	7.32%	138	73,156
				Sb ₂ O ₃	1309-64-4	0.64%	12	6,361
				TBBA	79-94-7	0.64%	12	6,361
	EMC GREEN	31.81%	600	silica	7631-86-9	23.86%	450	238,552
				epoxy resin	Proprietary	4.93%	93	49,301
				epoxy polymer	Proprietary	2.39%	45	23,855
				Sb ₂ O ₃	1309-64-4	0.54%	10.2	5,406
				carbon black	1333-86-4	0.1%	1.8	954
plating**	tin/lead process	0.54%	10.1	Sn	7440-31-5	0.43%	8.08	4,283
				Pb	7439-92-1	0.11%	2.02	1,071
	100% tin process	0.54%	10.1	Sn	7440-31-5	0.54%	10.1	5,354