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2N3375
2N3632/2N3733

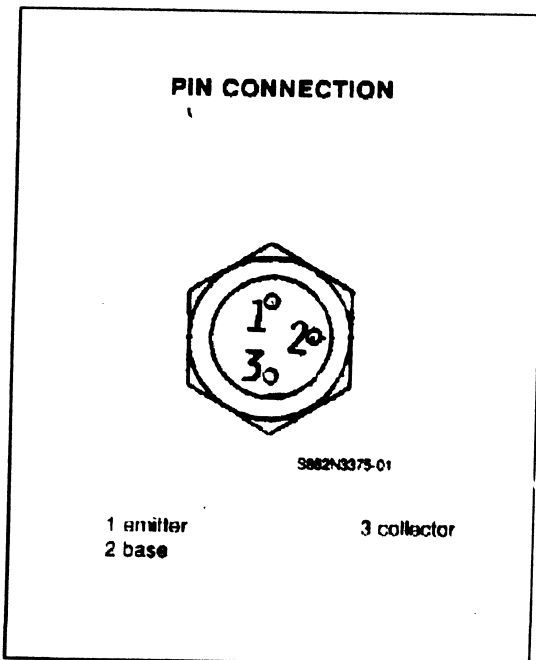
RF & MICROWAVE TRANSISTORS
VHF-UHF CLASS C WIDE BAND

- FREQUENCY 130 TO 400MHz
- VOLTAGE 28V
- POWER OUT 2.5 TO 13.5W
- HIGH POWER GAIN
- HIGH EFFICIENCY
- CLASS C TRANSISTORS
- COMMON EMITTER



TO 60 (M137)

ORDER CODE	BRANDING
SD1050	2N3375
SD1070	2N3632
SD1075	2N3733



DESCRIPTION

This line of silicon epitaxial NPN planar high frequency transistors employs a multi emitter electrode design. This feature together with a heavily diffused base matrix located between the individual emitters results in high RF current handling capability, high power gain, low base resistance and low output capacitance. These transistors are intended for Class A, B, or C amplifier, oscillator or frequency multiplier circuits and are specifically designed for operation in the VHF-UHF region.

Device	Package
2N3375	TO 60
2N3632	TO 60
2N3733	TO 60



2N3375/2N3632/2N3733

ABSOLUTE MAXIMUM RATINGS ($T_{case} = 25^{\circ}C$)

Symbol	Parameter	2N3375	2N3632	2N3733	Unit
V_{CBO}	Collector to Base Voltage	65	65	65	V
V_{CEO}	Collector to Emitter Voltage	40	40	40	V
V_{EBO}	Emitter to Base Voltage	4.0	4.0	4.0	V
$I_{C(max)}$	Continuous Collector Current	1.5	3.0	3.0	A
P_D	Total Dissipation at 25°C Stud	11.6	23.0	23.0	V
T_j	Junction Temperature	200	200	200	°C
T_{stg}	Storage Temperature	- 65 to 150	- 65 to 150	- 65 to 150	°C

		2N3375	2N3632	2N3733	
$R_{th(j-c)}$	Junction-case Thermal Resistance	15.0	7.8	7.8	°C

ELECTRICAL CHARACTERISTICS ($T_{case} = 25^{\circ}C$)

STATIC

Symbol	Test Conditions		2N3375			2N3632			2N3733			Unit
			Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	
BV_{CBO}	$I_C = 0.5mA$	$V_{BE} = 0$	65			65			65			V
BV_{CEO}	$I_C = 200mA$	$I_B = 0$	40			40			40			V
BV_{EBO}	$I_E = 0.25mA$	$I_C = 0$	4	$(I_E = 0.1mA)$		4			4			V
I_{CEO}	$V_{CB} = 30V$	$I_E = 0$			0.1			0.25			0.25	mA
H_{FE}	$V_{CE} = 5V$	$I_C = 250mA$	10			5	$(I_C = 1A)$		10			

DYNAMIC

Symbol	Test Conditions		2N3375			2N3632			2N3733			Unit
			Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	
P_O	F = 175MHz	$V_{CE} = 28V$				13.5						W
	Class C											
P_O	F = 400MHz	$V_{CC} = 28V$	3						10			W
G_P	F = 175MHz	$V_{CC} = 28V$				5.8						dB
G_P	F = 400MHz	$V_{CC} = 28V$	4.8						4.0			dB
η_C	F = 175MHz	$V_{CC} = 28V$				70						%
η_C	F = 400MHz	$V_{CC} = 28V$	40						45			%
C_{OB}	F = 1MHz	$V_{CB} = 30V$			10			20			20	pF