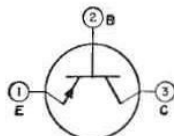


## TRANSISTOR



Germanium p-n-p type used in converter (mixer-oscillator) applications in AM automobile radio receivers. In an unneutralized circuit, this type can provide a useful conversion power gain of 37 db at 1.5 megacycles. JEDEC No. TO-1 package; outline 4, Outlines Section. This type is identical with type 2N1637 except for the following items:

# 2N1639

### MAXIMUM RATINGS

Emitter-to-Base Voltage (with collector open) ..... -0.5 max volt

### CHARACTERISTICS

Collector-Cutoff Current (with collector-to-base volts = -12 and emitter current = 0) ..... -7  $\mu$ A  
 Emitter-Cutoff Current (with emitter-to-base volts = -0.5 and collector current = 0) ..... -8  $\mu$ A

#### In Common-Base Circuit

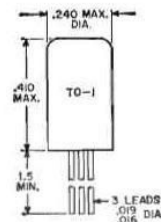
Small-Signal Forward Current-Transfer Ratio (with collector-to-base volts = -12, collector ma = -1, and frequency = 1 kilocycle) ..... 0.986

#### In Common-Emitter Circuit

DC Forward Current-Transfer Ratio (with collector-to-emitter volts = -12 and collector ma = -1) ..... 75

### TYPICAL OPERATION

DC Collector-to-Emitter Voltage	-5	-11	volts
DC Collector Current	-0.65	-0.65	ma
Signal Frequency	1.5	1.5	Mc
Input Resistance	1850	2200	ohms
Output Resistance at 252.5 kilocycles	0.1	0.2	megohm
RMS Base-to-Emitter Oscillator-Injection Voltage	100	100	mv
Useful Conversion Power Gain	35.4	37	db



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