



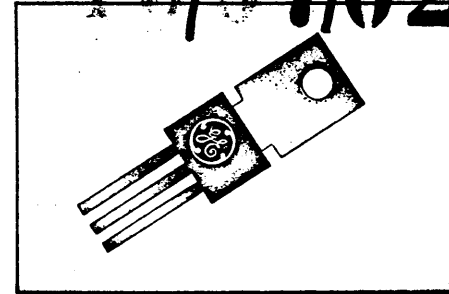
ELECTRONIC INNOVATIONS
IN ACTION
SEMICONDUCTORS

Silicon Power Tab Transistors



1 3/0 7/0 2

The General Electric D27C is a silicone plastic encapsulated power transistor designed for output stages of stereo amplifiers, automobile stereo, automobile voltage regulators, and other consumer electronics applications.

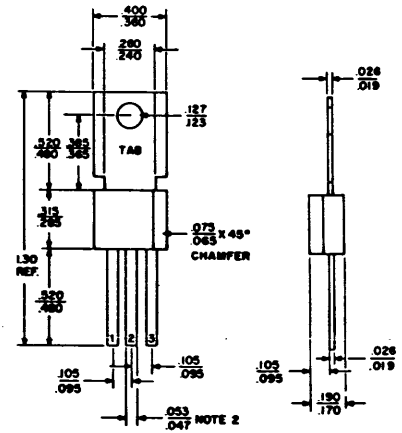


Leads Can Be Formed To A TO-5 Pin Circle,

absolute maximum ratings: (25°C) (unless otherwise specified)

| | | D27C1,2 | D27C3,4 | |
|---|---------------|-------------|---------|-------|
| Voltages | | | | |
| Collector to Emitter | V_{CEO} | 40 | 30 | Volts |
| Emitter to Base | V_{EBO} | 5 | 5 | Volts |
| Collector to Emitter | V_{CES} | 50 | 40 | Volts |
| Current | | | | |
| Collector (Continuous) | I_C | 3 | 3 | Amps |
| Dissipation | | | | |
| Total Power (Free Air at 50°C) | P_T | | | |
| With Tab | | 1.4 | 1.4 | Watts |
| Without Tab | | 1 | 1 | Watts |
| Total Power (Tab at 70°C)† | P_T | 8 | 8 | Watts |
| Thermal Impedance | | | | |
| Junction to Case | θ_{JC} | 7 | 7 | °C/W |
| Junction to Ambient | θ_{JA} | | | |
| With Tab | | 55 | 55 | °C/W |
| Without Tab | | 75 | 75 | °C/W |
| Temperature | | | | |
| Storage | T_{stg} | -55 to +150 | | °C |
| Lead Soldering, 1/16" ± 1/32" from case for 10 seconds max. | T_L | +260 | +260 | °C |

†Tab temperature measured on center of tab, 1/16" from plastic body.



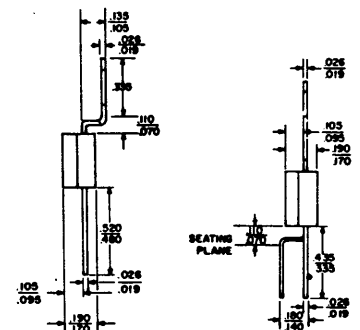
NOTES:
 1. ALL DIMENSIONS ARE IN INCHES AND ARE REFERENCE UNLESS TOLERANCED.
 2. 0.043-0.057 LEAD WIDTH WITHIN 0.100 OF BODY.

LEAD LABELS:
 1. BASE
 2. COLLECTOR
 3. EMITTER

electrical characteristics: (25°C) (unless otherwise specified)

| | | Min. | Max. | |
|---|-----------|------|------|---------|
| Emitter Cutoff Current ($V_{EB}=5V$) | I_{EBO} | | 0.1 | μA |
| Collector Cutoff Current ($V_{CE}=50V$) D27C1 | I_{CES} | | 10 | μA |
| D27C2 | I_{CES} | | 100 | μA |
| ($V_{CE}=40V$) D27C3 | I_{CES} | | 10 | μA |
| D27C4 | I_{CES} | | 100 | μA |
| ($T_J=125^\circ C$) | | | | |
| ($V_{CE}=50V$) D27C1 | I_{CES} | | 100 | μA |
| D27C2 | I_{CES} | | 500 | μA |
| ($V_{CE}=40V$) D27C3 | I_{CES} | | 100 | μA |
| D27C4 | I_{CES} | | 500 | μA |

Lead Forming



Rivet or Screw Mounting to Flat Surface

Printed Circuit Board Mounting

| | | Min. | Max. | |
|--|---------------|------|------|------|
| Collector Saturation Voltage | | | | |
| ($I_C=1A, I_B=50mA$) D27C1,3 | $V_{CE(sat)}$ | | 1.0 | Volt |
| ($I_C=1A, I_B=100mA$) D27C2,4 | $V_{CE(sat)}$ | | 1.0 | Volt |
| Forward Current Transfer Ratio | | | | |
| ($V_{CE}=1V, I_C=200mA$) D27C1,3 | h_{FE} | 40 | | |
| D27C2,4 | h_{FE} | 25 | | |
| ($V_{CE}=1V, I_C=1A$) D27C1,3 | h_{FE} | 20 | | |
| D27C2,4 | h_{FE} | 10 | | |
| Collector Capacitance | | | | |
| ($V_{CB}=10V, f=1MHz$) | C_{CBO} | | 100 | pF |
| AC Forward Current Transfer Ratio | | | | |
| ($V_{CE}=4V, I_C=20mA, f=5MHz$) | | 4 | | |

Typical h_{FE} vs. I_C

