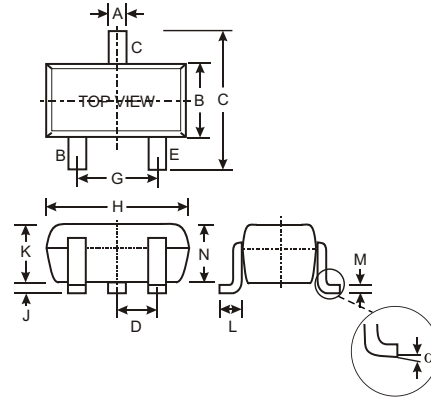


### Features

- Ultra Miniature Surface Mount Package
- Complementary PNP Type Available (2DA1774Q,R,S)

### Mechanical Data

- Case: SOT-523, Molded Plastic
- Case material - UL Flammability Rating Classification 94V-0
- Moisture sensitivity: Level 1 per J-STD-020A
- Terminals: Solderable per MIL-STD-202, Method 208
- Terminal Connections: See diagram
- Marking (See Page 2): 2DC4617Q: 8D  
2DC4617R: 8E  
2DC4617S: 8F
- Ordering & Date Code Information: See Page 2
- Weight: 0.002 grams (approx.)



SOT-523			
Dim	Min	Max	Typ
A	0.15	0.30	0.22
B	0.75	0.85	0.80
C	1.45	1.75	1.60
D	—	—	0.50
G	0.90	1.10	1.00
H	1.50	1.70	1.60
J	0.00	0.10	0.05
K	0.60	0.80	0.75
L	0.10	0.30	0.22
M	0.10	0.20	0.12
N	0.45	0.65	0.50
$\alpha$	0°	8°	—
All Dimensions in mm			

### Maximum Ratings @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	2DC4617Q/R/S	Unit
Collector-Base Voltage	$V_{CBO}$	60	V
Collector-Emitter Voltage	$V_{CEO}$	50	V
Emitter-Base Voltage	$V_{EBO}$	7.0	V
Collector Current - Continuous (Note 1)	$I_C$	150	mA
Power Dissipation (Note 1)	$P_d$	150	mW
Thermal Resistance, Junction to Ambient (Note 1)	$R_{\theta JA}$	833	$^\circ\text{C/W}$
Operating and Storage and Temperature Range	$T_j, T_{STG}$	-55 to +150	$^\circ\text{C}$

### Electrical Characteristics @ $T_A = 25^\circ\text{C}$ unless otherwise specified

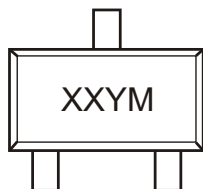
Characteristic	Symbol	Min	Max	Unit	Test Condition
<b>OFF CHARACTERISTICS (Note 2)</b>					
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	60	—	V	$I_C = 50\mu\text{A}, I_E = 0$
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	50	—	V	$I_C = 1.0\text{mA}, I_B = 0$
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	7.0	—	V	$I_E = 50\mu\text{A}, I_C = 0$
Collector Cutoff Current	$I_{CBO}$	—	100	nA	$V_{CB} = 60\text{V}$
Emitter Cutoff Current	$I_{EBO}$	—	100	nA	$V_{EB} = 7.0\text{V}$
<b>ON CHARACTERISTICS (Note 2)</b>					
DC Current Gain	2DC4617Q 2DC4617R 2DC4617S $h_{FE}$	120 180 270	270 390 560	—	$V_{CE} = 6.0\text{V}, I_C = 1.0\text{mA}$
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$	—	0.4	V	$I_C = 50\text{mA}, I_B = 5.0\text{mA}$
<b>SMALL SIGNAL CHARACTERISTICS</b>					
Output Capacitance	$C_{obo}$	2.0 Typ.	3.5	pF	$V_{CB} = 12\text{V}, f = 1.0\text{MHz}, I_E = 0$
Current Gain-Bandwidth Product	$f_T$	180 Typ.	—	MHz	$V_{CE} = 12\text{V}, I_E = -2\text{mA}, f = 1\text{MHz}$

- Notes:
1. Part mounted on FR-4 board with recommended pad layout, which can be found on our website at <http://www.diodes.com/datasheets/ap02001.pdf>.
  2. Short duration pulse test used to minimize self-heating effect.

**Ordering Information** (Note 3)

Device	Packaging	Shipping
2DC4617Q-7	SOT-523	3000/Tape & Reel
2DC4617R-7	SOT-523	3000/Tape & Reel
2DC4617S-7	SOT-523	3000/Tape & Reel

Notes: 3. For Packaging Details, go to our website at <http://www.diodes.com/datasheets/ap02007.pdf>.

**Marking Information**

XX = Product Type Marking Code (See Page 1, e.g. 8D = 2DC4617Q)  
 YM = Date Code Marking  
 Y = Year (ex: N = 2002)  
 M = Month (ex: 9 = September)

Date Code Key

Year	1998	1999	2000	2001	2002	2003	2004
Code	J	K	L	M	N	P	R

Month	Jan	Feb	March	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Code	1	2	3	4	5	6	7	8	9	O	N	D