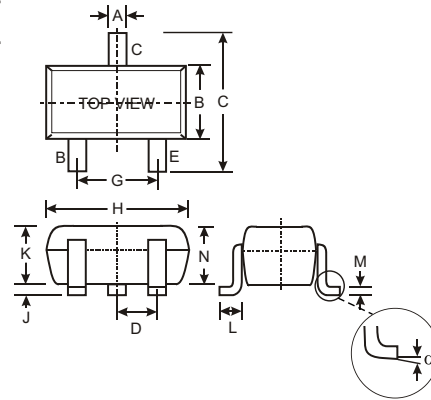


Features

- Ultra Miniature Surface Mount Package
- Complementary PNP Type Available (2DA1774Q,R,S)
- Also Available in Lead Free Version

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
- Also Available in Lead Free Plating (Matte Tin Finish). Please see Ordering Information, Note 4, on Page 2
- 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
α	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	
OFF CHARACTERISTICS (Note 2)						
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	$V_{EB} = 7.0\text{V}$	
ON CHARACTERISTICS (Note 2)						
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	$I_C = 50\text{mA}, I_B = 5.0\text{mA}$	
SMALL SIGNAL CHARACTERISTICS						
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	$V_{CE} = 12\text{V}, I_E = -2\text{mA}, f = 1\text{MHz}$	

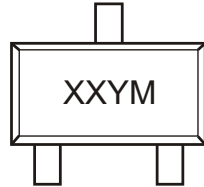
- Notes:
1. Part mounted on FR-4 board with recommended pad layout, which can be found on our website at <http://www.diodes.com/datasheets/ap02001.pdf>.
 2. Short duration pulse test used to minimize self-heating effect.

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>.
 4. For Lead Free version (with Lead Free terminal finish) part number, please add "-F" suffix to part number above.
 Example: 2DC4617S-7-F.

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