

MA2C840 (MA840)

Silicon epitaxial planar type

For AFC of UHF and VHF electronic tuners

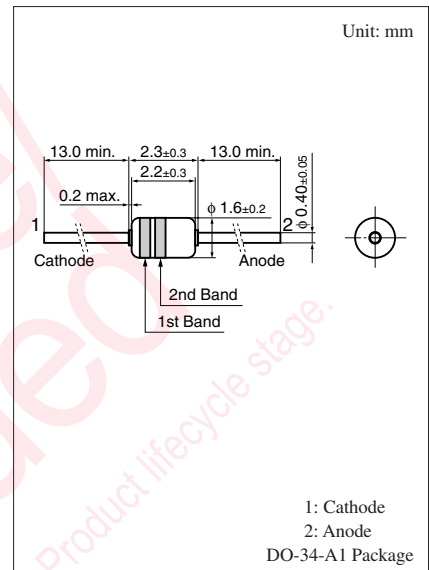
■ Features

- Extra-small DHD envelope, allowing to insert a 5 mm pitch hole
- Small series resistance r_D
- Large variable capacitance range

■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

| Parameter | Symbol | Rating | Unit |
|--------------------------------|-----------|-------------|------------------|
| Reverse voltage | V_R | 32 | V |
| Maximum peak reverse voltage * | V_{RM} | 34 | V |
| Junction temperature | T_j | 150 | $^\circ\text{C}$ |
| Storage temperature | T_{stg} | -55 to +150 | $^\circ\text{C}$ |

Note) *: $R_L = 2.2 \text{ k}\Omega$, 1 pulse



■ Electrical Characteristics $T_a = 25^\circ\text{C} \pm 3^\circ\text{C}$

| Parameter | Symbol | Conditions | Min | Typ | Max | Unit |
|---------------------|--------------------------|---|------|-----|------|----------|
| Forward voltage | V_F | $I_F = 100 \text{ mA}$ | | | 1.1 | V |
| Reverse current | I_R | $V_R = 30 \text{ V}$ | | | 10 | nA |
| Diode capacitance | $C_{D(2V)}$ | $V_R = 2 \text{ V}, f = 1 \text{ MHz}$ | 10.5 | | 16.0 | pF |
| | $C_{D(10V)}$ | $V_R = 10 \text{ V}, f = 1 \text{ MHz}$ | 3.3 | | 5.7 | pF |
| Capacitance ratio * | $C_{D(2V)} / C_{D(10V)}$ | | 2.5 | | 3.4 | — |
| Series resistance | r_D | $C_D = 9 \text{ pF}, f = 470 \text{ MHz}$ | | | 1.2 | Ω |

Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7031 measuring methods for diodes.

2. Absolute frequency of input and output is 470 MHz.

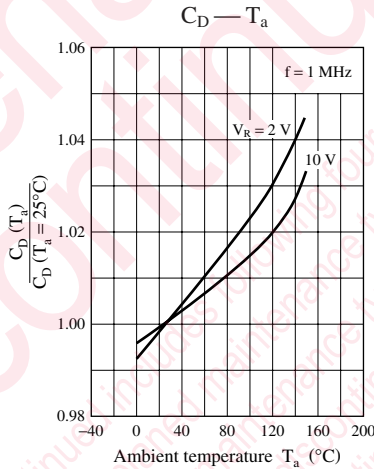
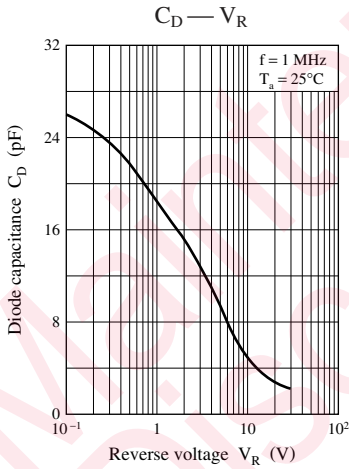
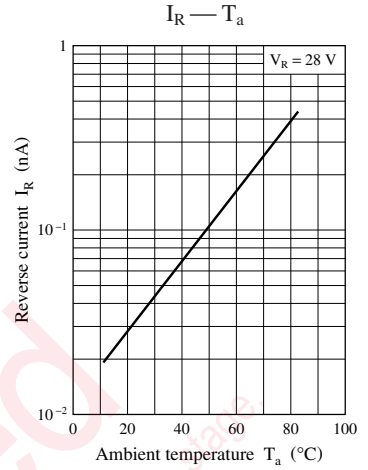
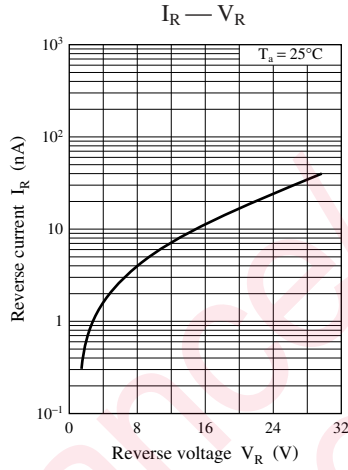
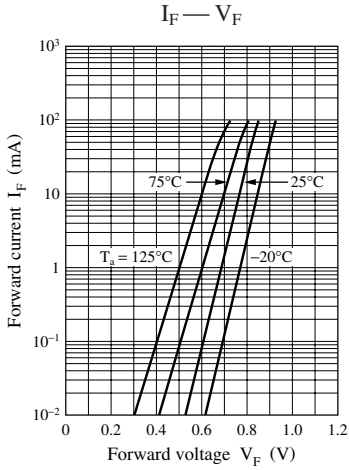
3. *: Rank classification

| Rank | A | B |
|--------------------------|------------|------------|
| $C_{D(2V)} / C_{D(10V)}$ | 2.5 to 3.0 | 2.8 to 3.4 |

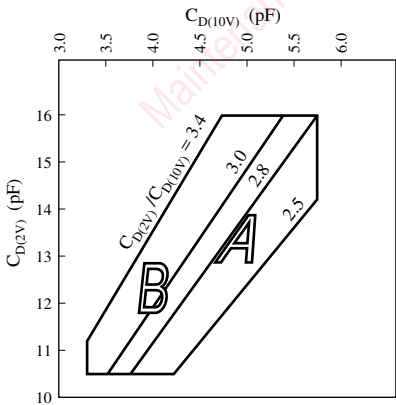
■ Cathode Mark

| Class | A | B |
|----------|------------|------------|
| 1st band | Light Blue | Light Blue |
| 2nd band | White | Green |

Note) The part number in the parenthesis shows conventional part number.



C_D rank classification



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