

MA2C840 (MA840)

Silicon epitaxial planar type

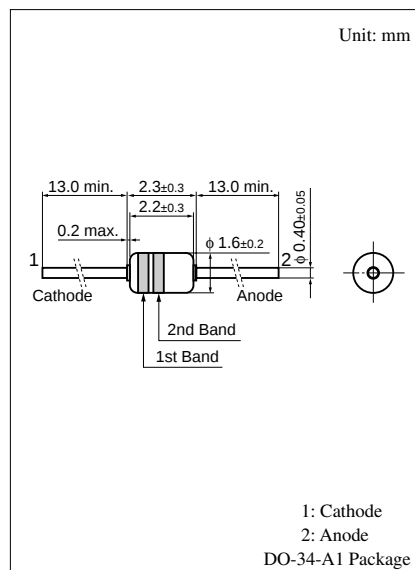
For AFC of UHF and VHF electronic tuner

■ Features

- Super-small envelope (DO-34), 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 (DC)	V_R	32	V
Peak reverse voltage	V_{RM}	34	V
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$



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

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Forward voltage (DC)	V_F	$I_F = 100 \text{ mA}$			1.1	V
Reverse current (DC)	I_R	$V_R = 30 \text{ V}$			10	nA
Terminal capacitance	C_t	$V_R = 2 \text{ V}, f = 1 \text{ MHz}$	10.5		16	pF
		$V_R = 10 \text{ V}, f = 1 \text{ MHz}$	3.3		5.7	
Capacitance ratio *	$C_{t(2V)}/C_{t(10V)}$		2.5		3.4	—
	$C_{t(6V)}/C_{t(10V)}$		1.64			
Series resistance	r_D	$C_D = 9 \text{ pF}, f = 470 \text{ MHz}$			1.2	Ω

Note) 1. Rated input/output frequency: 470 MHz

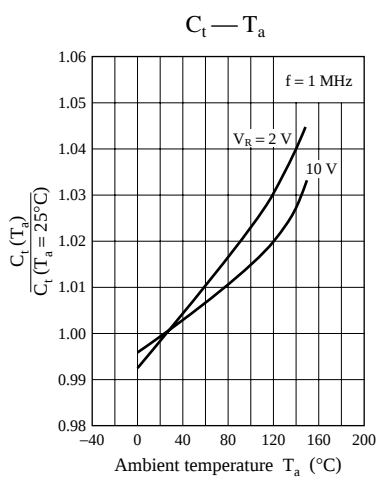
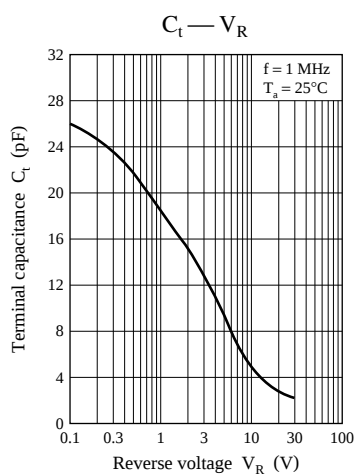
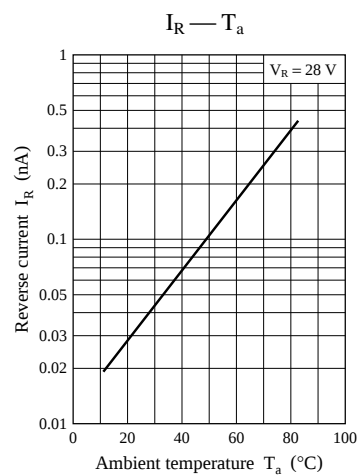
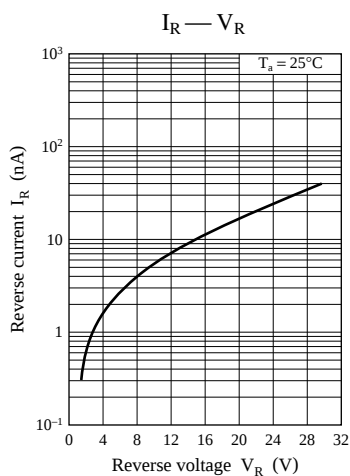
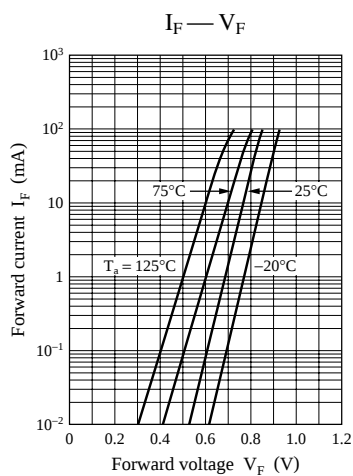
2. *: $C_{t(2V)}/C_{t(10V)}$, $C_{t(6V)}/C_{t(10V)}$ rank classification table

Class	A	B	M
$C_{t(2V)}/C_{t(10V)}$	2.5 to 3.0	2.8 to 3.4	2.8 to 3.4
$C_{t(6V)}/C_{t(10V)}$	—	—	>1.64

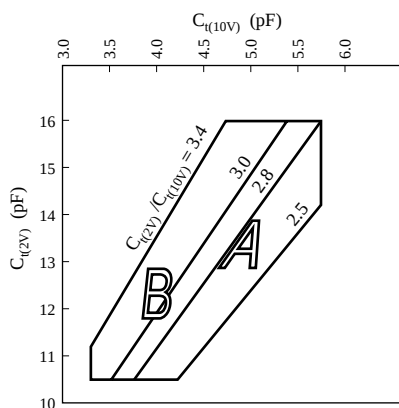
■ Cathode Mark

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

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



C_t rank classification



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