

# MA2C840

## Silicon epitaxial planar type

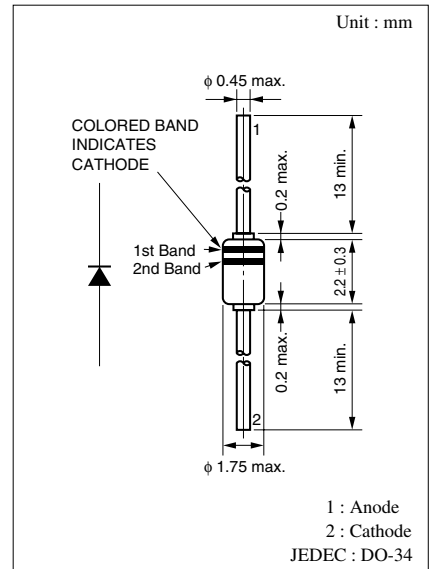
For AFC of UHF and VHF electronic tuner

### ■ Features

- Super-small envelope (DO-34), allowing to insert into 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 forward current	$V_{RM}$	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 current (DC)	$I_F$	$I_F = 100 \text{ mA}$			1.1	V
Reverse current (DC)	$I_R$	$V_R = 30 \text{ V}$			10	nA
Reverse current (DC)	$C_t$	$V_R = 2 \text{ V}, f = 1 \text{ MHz}$	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	$\Omega$

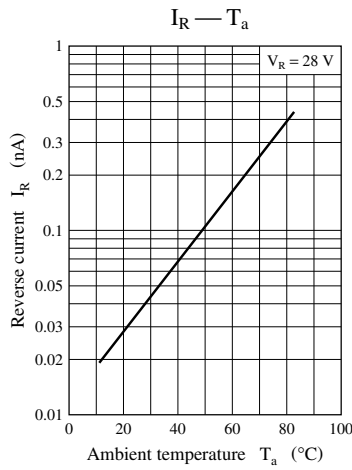
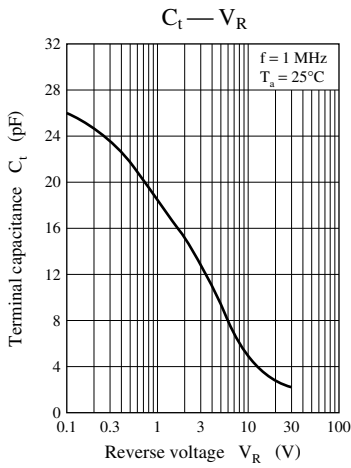
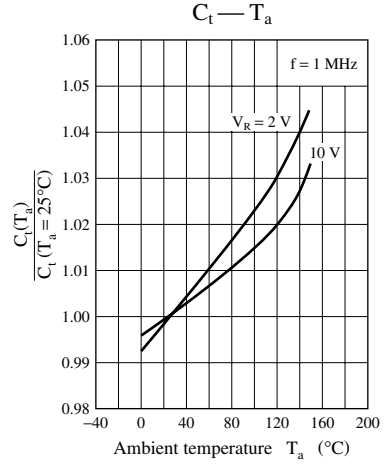
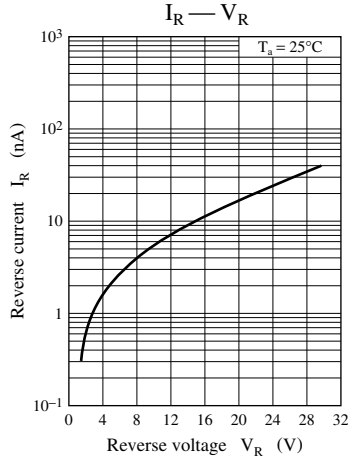
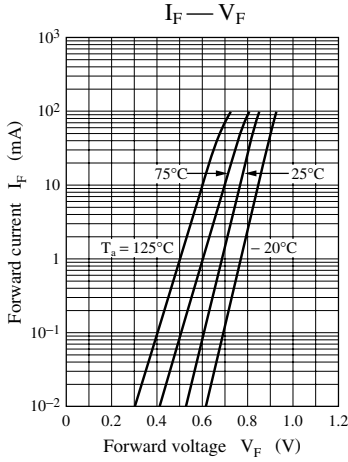
Note) 1. Rated input/output frequency: 470 MHz

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 Indication

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



**$C_t$  rank classification**

