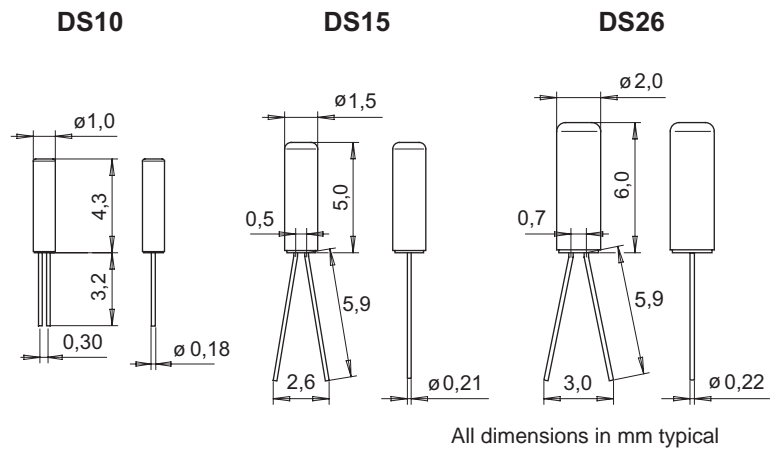




DIMENSIONS



Very small metal-can packages
 Very price competitive
 High stability
 Low aging
 Low power consumption
 High shock and vibration resistance

DESCRIPTION:

The DS-crystal-series are tubular metal-can packages in the standardized watch-crystal sizes $\varnothing 2 \times 6$ mm, $\varnothing 1.5 \times 5$ mm and $\varnothing 1 \times 4.3$ mm for thru-hole applications.

Within the package is a high-quality tuning fork quartz crystal resonator, manufactured with precision high-volume photolithographic process and operating in the fundamental mode at 32.768 kHz.

Due to highly automated, large-volume production, the DS-crystal-series is very price competitive and ideal for any consumer application.

DS26 and DS15 are supplied in plastic-bags (1'000 pcs.)

DS10 is supplied in plastic-bags (200 pcs.)

ELECTRICAL CHARACTERISTICS AT 25°C:

Package Size		DS26	DS15	DS10	
Nominal frequency	F_L	32.768	32.768	32.768	kHz
Load capacitance	¹⁾ C_L	8.2	8.2	8.2	pF
Frequency tolerance	²⁾ $\Delta F/F$	+/-20	+/-20	+/-20	ppm
	$\Delta F/F$	+/-30	+/-30	+/-30	ppm
	$\Delta F/F$	+/-100	+/-100	+/-100	ppm
Series resistance typ./max.	R_S	30 / 42	35 / 50	45 / 60	k Ω
Motional capacitance typ.	C_1	2.1	2.1	2.4	fF
Static capacitance typ.	C_0	0.9	0.9	0.9	pF
Drive level max.	P	1.0	1.0	1.0	μ W
Insulation resistance min.	R_i	500	500	500	M Ω
Aging first year max.	$\Delta F/F$	+/-3	+/-3	+/-3	ppm
Turnover temperature	T_0	25 +/-5	25 +/-5	25 +/-5	$^{\circ}$ C
Frequency vs. temperature	$\Delta F/F_0$	$-0.035 \text{ ppm}/^{\circ}\text{C}^2 (T - T_0)^2 \pm 10\%$			ppm

1) Other load capacitances on request.

2) Tighter and wider frequency tolerances on request.

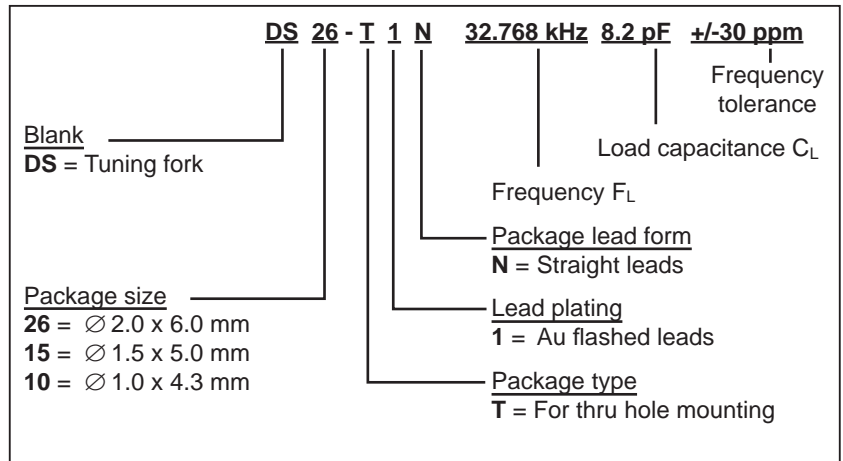
ENVIRONMENTAL CHARACTERISTICS:

		Conditions	Max. Dev.
Storage temp. range		-20 to +70°C	
Operating temp. range		-10 to +60°C	
Shock resistance	ΔF/F	5000 g, 0.3 ms, ½ sine	+/-5 ppm
Vibration resistance	ΔF/F	20 g / 10–2000 Hz	+/-5 ppm

TERMINATIONS AND PROCESSING:

Type	Termination	Processing
DS26-T1N	Can: Ni plated Leads: Straight leads Au flashed	Thru-hole mounting Wave or hand soldering Max. 280°C / 5 sec. leads only
DS15-T1N	Can: Ni plated Leads: Straight leads Au flashed	Thru-hole mounting Wave or hand soldering Max. 280°C / 5 sec. leads only
DS10-T1N	Can: Ni plated Leads: Straight leads Au flashed	Thru-hole mounting Wave or hand soldering Max. 280°C / 5 sec. leads only

PART NUMBER/ ORDERING INFORMATION EXAMPLE:



All specifications subject to change without notice. 04.06



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